NOVEMBER 24, 1945

Railway Age

Founded in 1856

THE LIBRARY OF CONGRESS SERIAL RECORD
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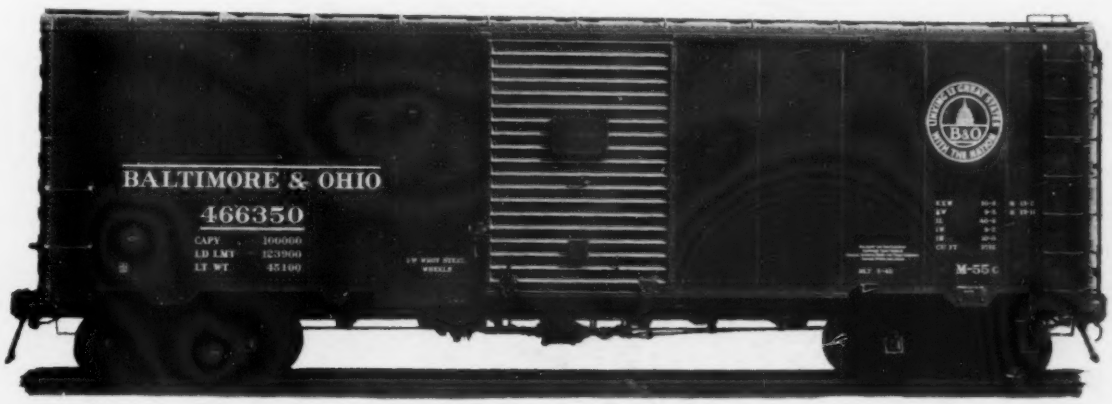
"YOUNGSTOWN"

IMPROVED

STEEL DOORS CAMEL FIXTURES



7′ Clear Door Opening

ONE OF MORE THAN A MILLION
YOUNGSTOWN STEEL DOORS

IN SERVICE ON AMERICAN RAILROADS

BOX AUTO SPECIAL

STANDARD WEIGHT LIGHT WEIGHT

YOUNGSTOWN STEEL DOOR COMPANY

Camel Sales Company
Cleveland Chicago

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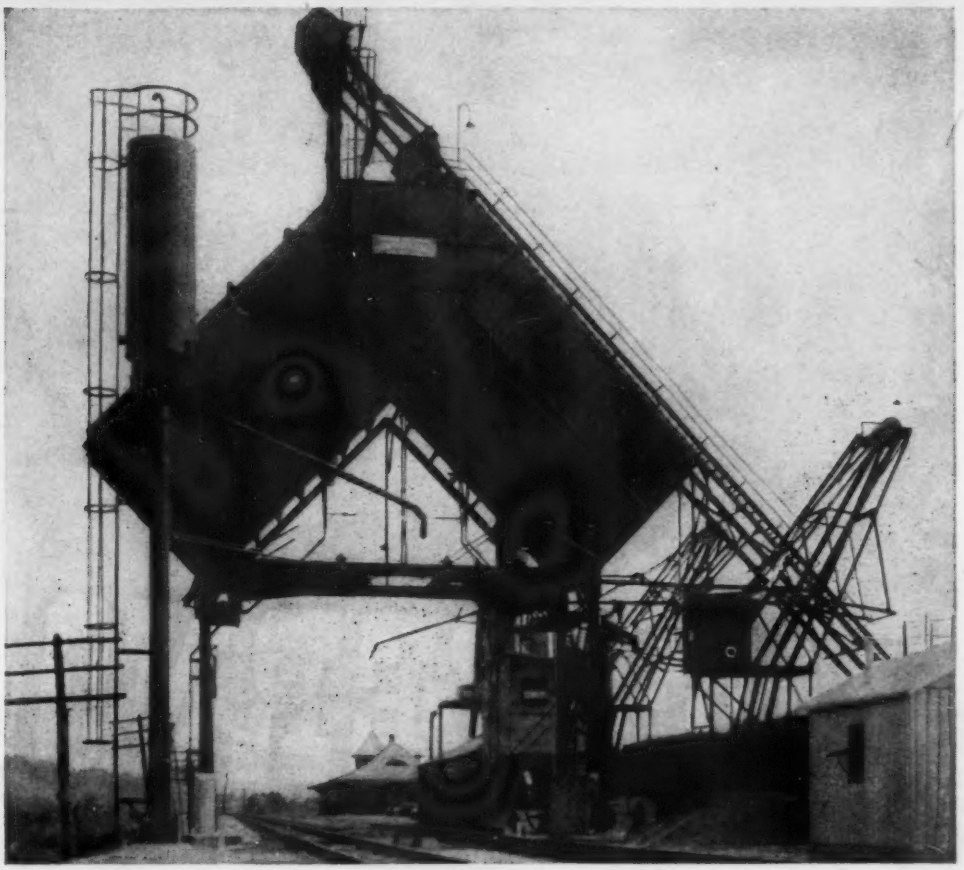
New York Youngstown

30%

of all freight cars ordered by the railroads and private car companies during the first nine months of 1945 were equipped with . . . .

UNIT TRUCKS



WHY THEY SPECIFY Mayari R

RHYMES WITH "FIERY"

Suppose you were designing a hopper car, or a coaling station like the one shown above—types of equipment that have to stand up to a lot of hard knocks. You would want to make them as strong and rugged as possible. Yet you'd want to save weight, too. And because of working conditions, you'd want to provide resistance to abrasion and to corrosion caused by coal and fumes. And, of course, you'd have to watch your costs, too.

Today's designers are facing up to problems like these . . . and solving them by specifying Mayari R, Bethlehem's low-alloy, high-strength steel. Here's why:

Mayari R has a yield point of 50,000 psi—almost double that of mild-carbon steel. It has atmospheric-corrosion resistance of 5 to 6 times that of mild-carbon steel, 2 to 4 times that of copper-bearing steel. The high strength and corrosion resistance, combined, permit building with thinner, lighter sections, making possible weight savings up to 40 per cent.

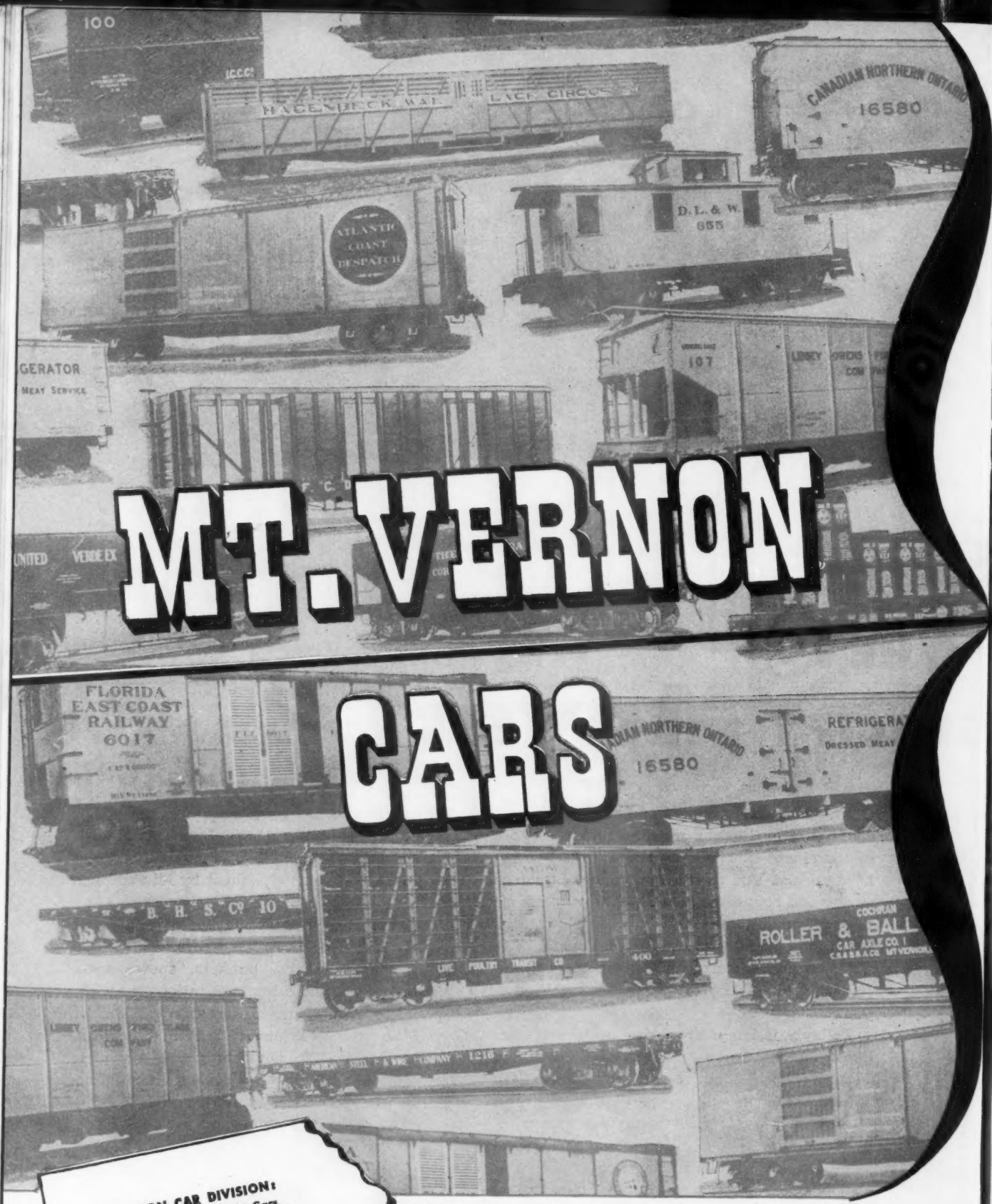
Mayari R also has good resistance to impact, even at zero temperatures. In addition, it is highly ductile, is easily fabricated under regular shop practices, readily welded by all the usual methods.

Mayari R is performing today in a wide variety of ways—in railroad cars, coaling stations, smoke stacks, bunkers, snow plows, trucks, busses, and other applications too widespread to detail. Mayari R can probably serve you. Why not look into it? Send now for illustrated Mayari R booklet, giving complete information. There is no obligation. Address Bethlehem Steel Company, Bethlehem, Pa., or the nearest Bethlehem district office.

★ ★ ★ BETHLEHEM STEEL ★ ★ ★

Mayari R *makes it lighter... stronger... longer lasting*

Published weekly by Simmons-Boardman Publishing Corporation, 1309 Noble Street, Philadelphia, Pa. Entered as second class matter, January 4, 1933, at the Post Office at Philadelphia, Pa., under the act of March 3, 1879. Subscription price $6.00 for one year U. S. and Canada. Single copies, 25 cents each. Vol. 119, No. 21.



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Complete Line of Freight Cars.

LOCOMOTIVE DIVISION:
Diesel, Diesel-Electric, Electric, Steam, and Fireless Steam Locomotives.

PROCESS EQUIPMENT DIVISION:
Complete Line of Chemical, Food, and Petroleum Refinery Equipment.

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Division of **H. K. PORTER** CO

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55 Years of Achievement

in Building Cars for Railroads and Private Owners

Since 1890—when Mt. Vernon built its first freight car—the years have been marked by constant progress in design and construction of equipment for railroad and private car owners. New, double-bunker, steel-sheathed refrigerator cars now rolling off the production lines are an outstanding example of the Mt. Vernon tradition of quality workmanship.

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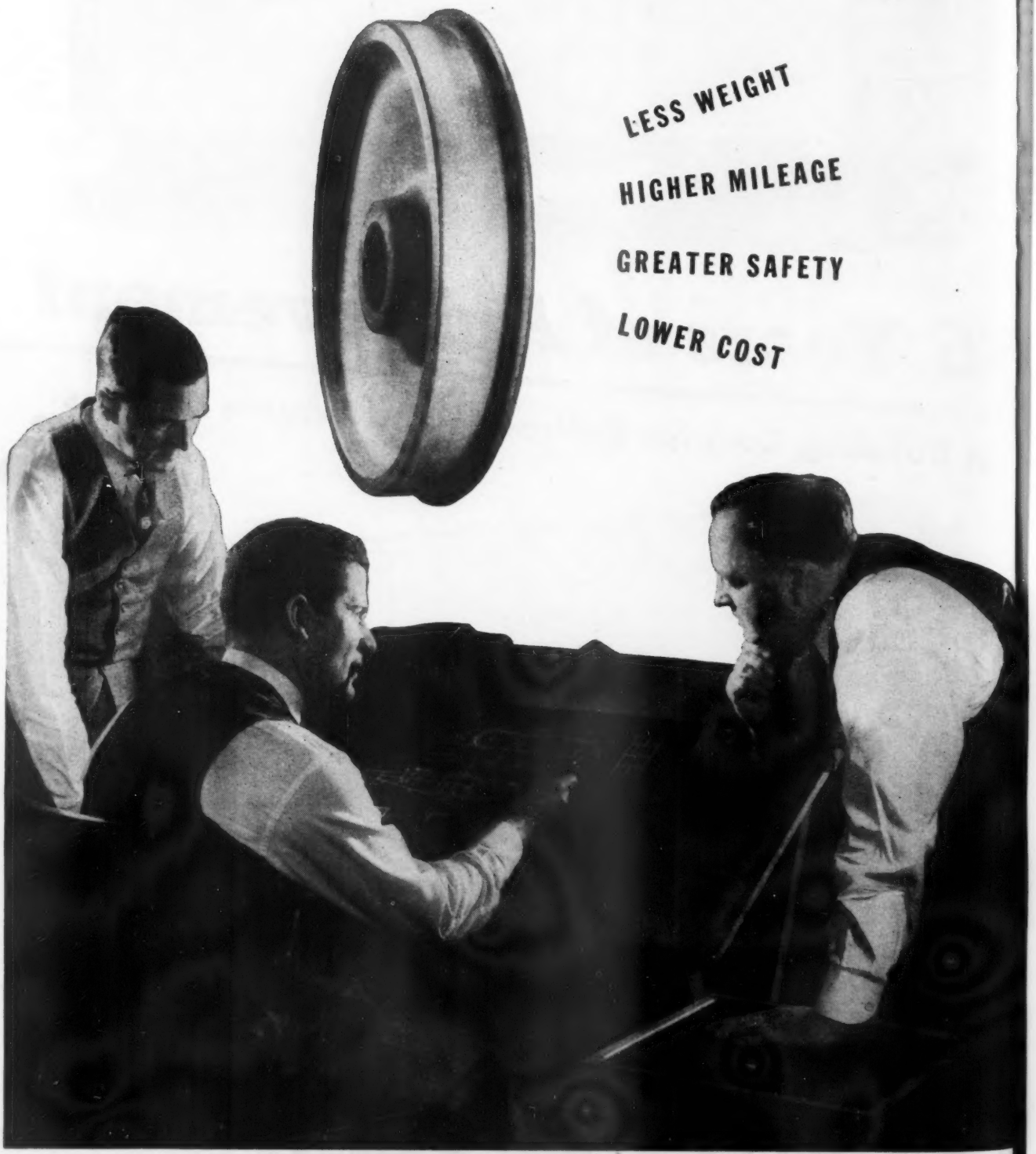
MT. VERNON CARS

PORTER
Better Built
Equipment
Established 1866

Re-Designing



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UNITED

Rolling Stock?

On Freight Cars, U·S·S One-Wear Wrought Steel Wheels give better service with greater safety at lower cost.

HERE are some facts about U·S·S One-Wear Wrought Steel Wheels for freight cars which can mean a substantial cut in overhead expense during the competitive days ahead:

They are safer. Everywhere One-Wear Wrought Steel Wheels have been adopted, delays due to wheel failure have been sharply reduced. Ability to endure heavy brake action and impact at high speeds is evidence of their high safety factor.

They improve service. By reducing the frequency of wheel changes, they keep freight cars in productive operation longer—in effect, increase available stock.

They reduce unsprung weight. U·S·S One-Wear Wrought Steel Wheels are light—will save 1,400 pounds per car, reducing unsprung weight 12% —a definite aid in reducing track maintenance and in adding extra loading capacity.

They cost less. On the basis of cost per thousand miles, U·S·S One-Wear Wrought Steel Wheels average substantially less than the cost of freight car wheels of other materials.

Today, more than 3,200,000 Wrought Steel Wheels are being used in freight service. More than 80% of all 70-ton freight cars are equipped with them . . . weighty evidence of their ability to stand up under exacting service conditions.

As you begin to re-equip and re-design your rolling stock for the competition ahead, it will pay you well to buy the wheels which give better service and greater safety at low cost. Specify U·S·S One-Wear Wrought Steel Wheels.

CARNEGIE-ILLINOIS STEEL CORPORATION

Pittsburgh and Chicago

Columbia Steel Company, San Francisco, *Pacific Coast Distributors*
United States Steel Export Company, New York

UNITED STATES STEEL

Freight car structures

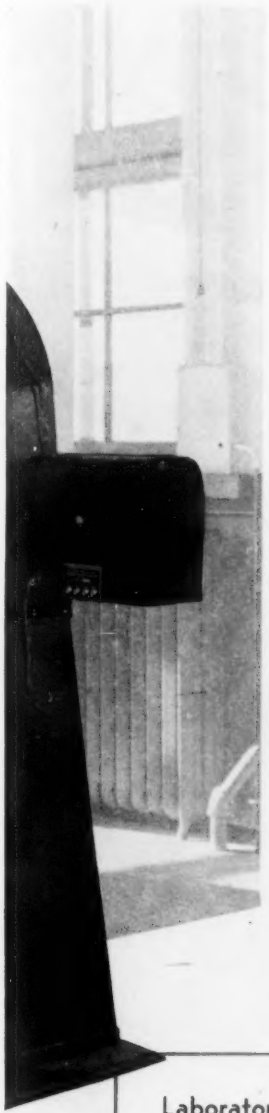
A corner of Pullman-Standard's modern laboratory showing testing of an A.A.R. standard freight car riveted bolster for comparison with a new design alloy steel welded bolster.

Pullman-

CHICAGO • NEW YORK

are a *continuous study*

at Pullman-Standard



● In engineering the light weight freight cars which we have pioneered, some of which have been on the rails giving good service for almost 15 years, we have made full practical use of recognized tests.

For instance, Pullman built welded alloy steel light weight box cars were subjected to strain measurements by placing 125 strain gages at several points on the center sills, bolsters, side and end sills, stringers and other members of the underframe as well as on the superstructure.

The A.A.R. report of these particular tests stated, "The method used was unique in this type of work. The stresses, in proportion to the yield point of the material, were in general much lower in the Pullman-Standard car than in the A.A.R. car, at practically all speeds of impact."

Laboratory research is part of our everyday work. We invite the opportunity to apply it in developing designs for your lightweight cars.

Standard CAR MANUFACTURING COMPANY

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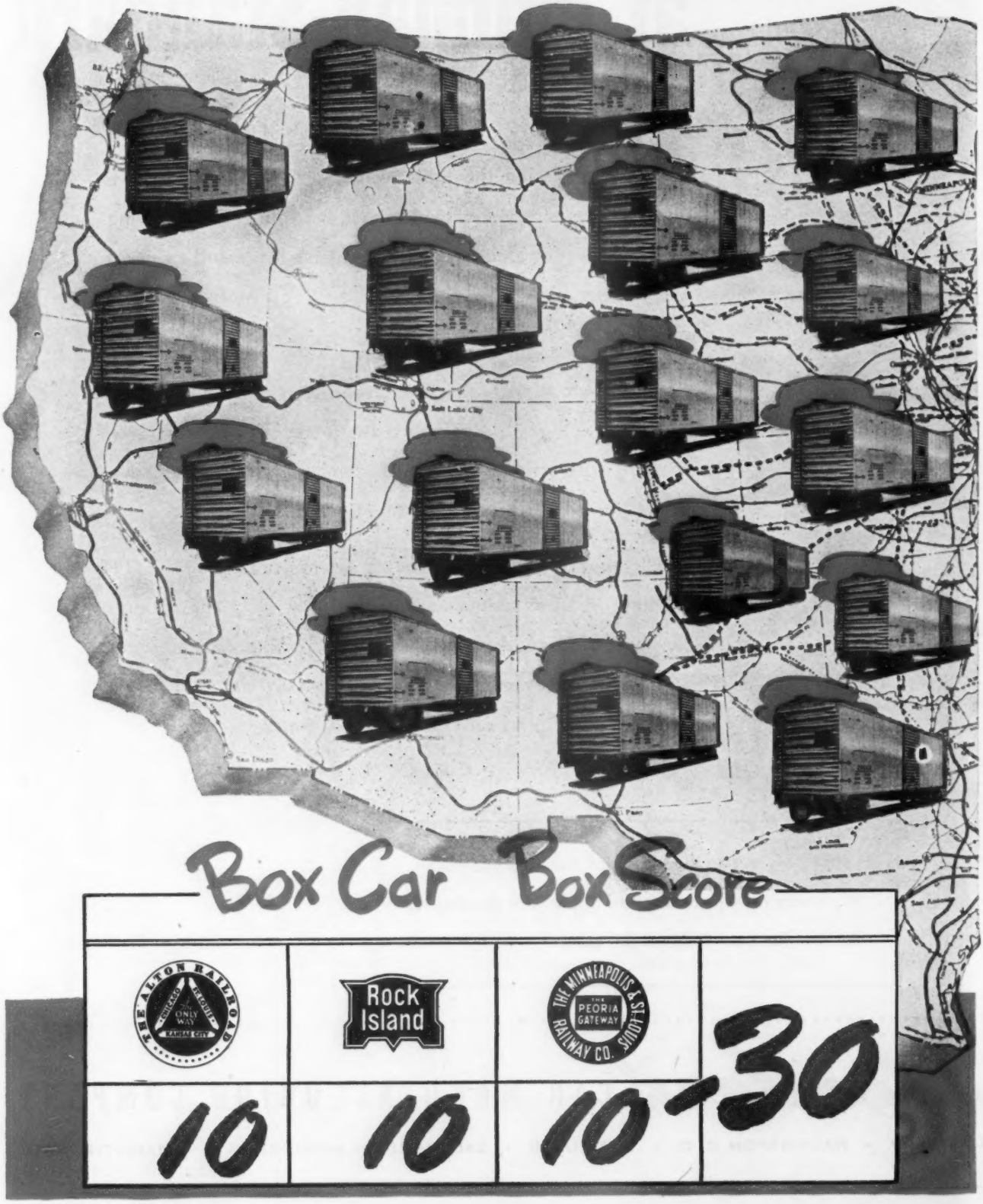
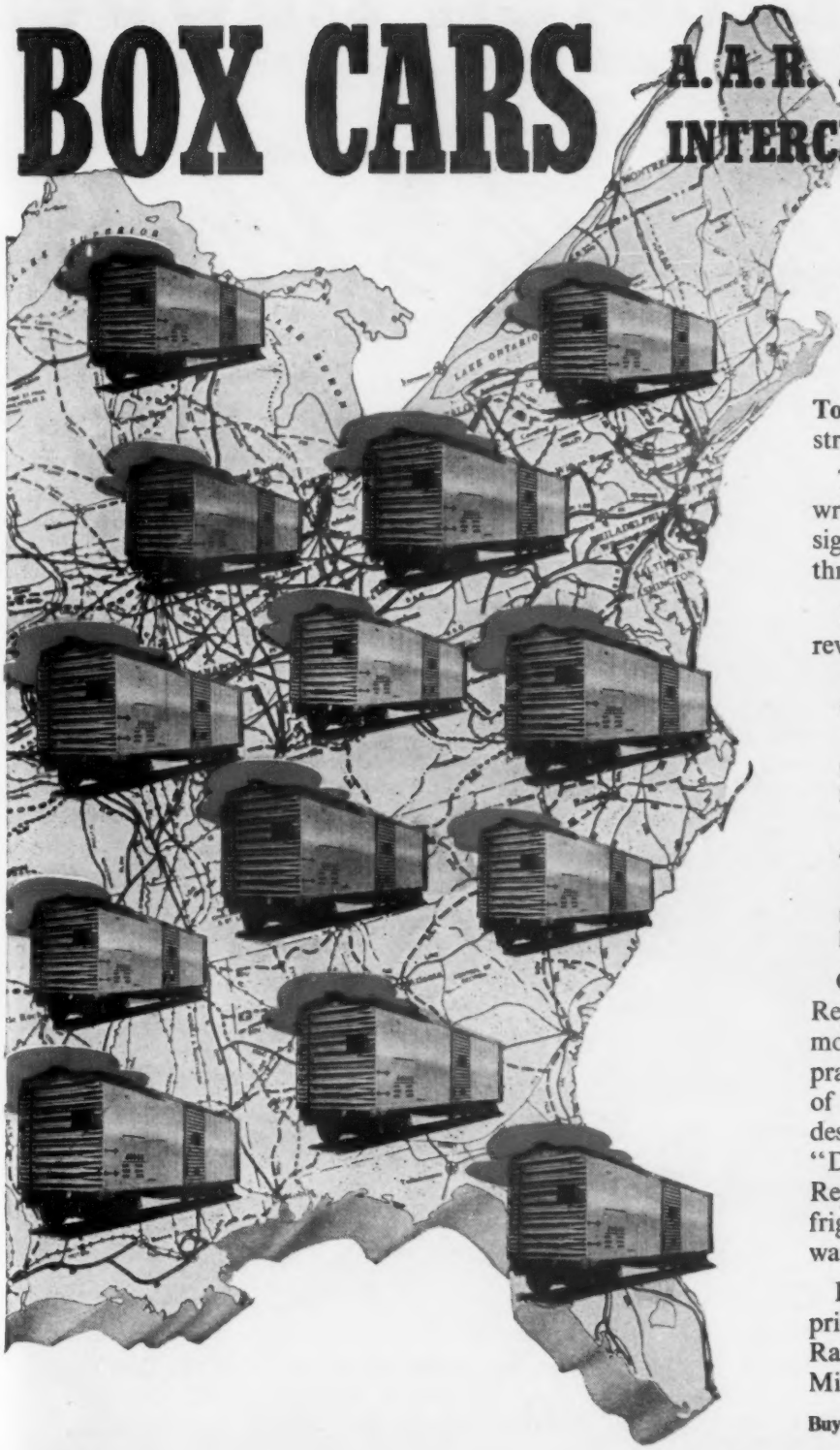


BOX CARS A.A.R. APPROVED FOR INTERCHANGE SERVICE



Rolling the rails today on three Class 1 Railroads!

Tons of weight saved—with increased structural strength!

That's just part of the story being written today by thirty Reynolds-designed aluminum box cars in use on three Class 1 Railroads.

Here are a few advantages of these revolutionary new box cars:

1. They are up to 10,000 lbs. lighter than conventional cars.

2. When equipped with A.A.R. approved trucks for passenger service can be cut into trains with speed in excess of 85 m.p.h.

3. Center of gravity, when empty, only 48" above rail.

4. High corrosion resistance of aluminum reduces maintenance cost...increases length of service.

Great new alloys developed by Reynolds metallurgists to furnish "armor plate" for warplanes, have made practical improved cars for *all* types of rolling stock including Reynolds-designed, 50-ton, 3 Hopper cars and "Day-Night" passenger coaches. Reynolds is building an aluminum refrigerator car and invites railroads to watch for a special announcement.

Reynolds welcomes inquiries. Blueprints available. Reynolds Metals Co., Railway Supply Division, 310 South Michigan Boulevard, Chicago 4, Ill.

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The Great New Source of

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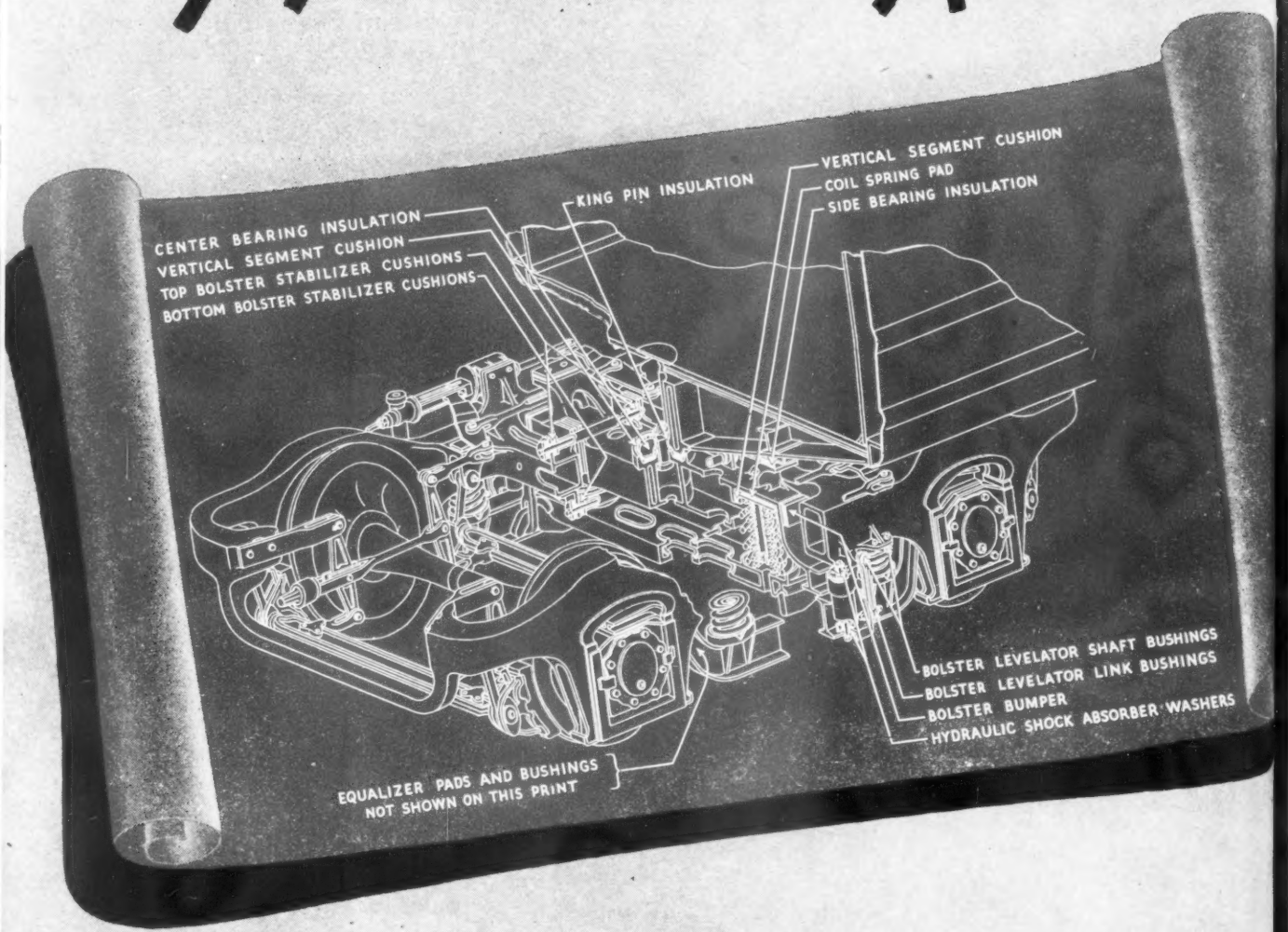
Engineered Rubber M

on the *Milwaukee Road*



DEAR to the heart of train-riding America are the "Hiawathas", the crack streamliners of "The Milwaukee Road."

More than 6½ million passengers have enjoyed the luxury of the Hiawathas' smooth, arrowy flights between Chicago and Minneapolis, St. Paul, Omaha, Sioux City and Sioux Falls.

Determination to make the Hiawathas the last word in comfort led "The Milwaukee Road", the designer and builder of those trains, to consult United States Rubber Company engineers.

This collaboration resulted in the introduction of rubber at strategic points to insulate the car body from the trucks and reduce the transmittal of noise and vibration created by the wheels rolling over the tracks, the movement and impact of metal parts, and the humming of generators, through rigid members of the frame into the car itself.

Center plates have rubber insulation, bolsters have cushions of rubber-bonded-to-metal at the ends, rubber bushings and washers are used; in fact, rubber is used wherever the transmission of vibration can be intercepted.

Such U.S. Rubber experience is being successfully applied in virtually every phase of transportation and industry—experience which is proving invaluable to manufacturers and their staffs.

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Constant High Volumetric Efficiency Under All Load Conditions

Completely open under full load

Partially open under light load

When the full volume of fluid or gas for which a DURABLA VALVE UNIT* is designed is passing through the valve there is a full unimpeded opening around the entire circumference of the valve member. In the style shown the only structural parts in the flow are the streamlined webs which support the valve stem. The inside contour of the valve member also offers less resistance to flow than flat valve disks.

When under partial load the freely mounted DURABLA VALVE MEMBER tips to permit the passage of small quantities of fluid or gas.

DURABLA VALVE UNITS thus achieve instant adjustment to variations in load; only open enough to allow passage of the flow; close instantly; eliminate slip; reduce cavitation, turbulence, and friction losses to a minimum; and permit pumps to operate at full load at slower speeds.

***Address DURABLA Engineering Department for Information and Bulletin; Reference* 9A11**

*Patent Numbers 2090486, 2117504

DURABLA MANUFACTURING COMPANY
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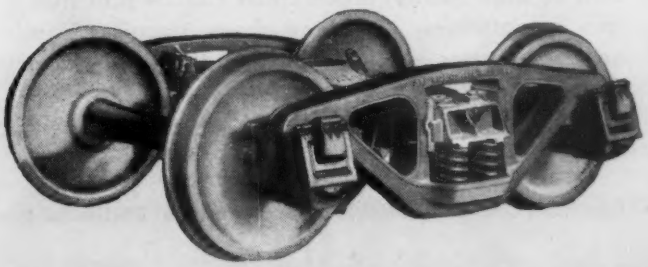
The A.S.F. Ride-Control Truck is in the weight and price range of conventional freight car trucks, yet it's easier on lading, roadbed, rolling stock... it's the modern freight car truck for cars of all types.

MINT-MARK OF ⬡ FINE CAST STEEL

Over 17,000 car sets are already in service or on order by 44 railroads and private car owners.

A·S·F *Ride-Control* TRUCK (A-3)

NO SPRING PLATES—NO SPRING PLANKS



LONG SPRING TRAVEL · CONSTANT FRICTION CONTROL

AMERICAN STEEL FOUNDRIES

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● As railroads expand their electronic and communication applications they will grow increasingly familiar with the Amphenol line with a proven background of honorable service on far-flung battlefronts around the world. Amphenol components—greatly improved by wartime experience and augmented in number, style and type—are now available. Simplifying buying, this wider selection of high-quality, tested items can be procured from one manufacturer. To know these popular Amphenol products better—write today for the new Condensed Catalog No. 72.

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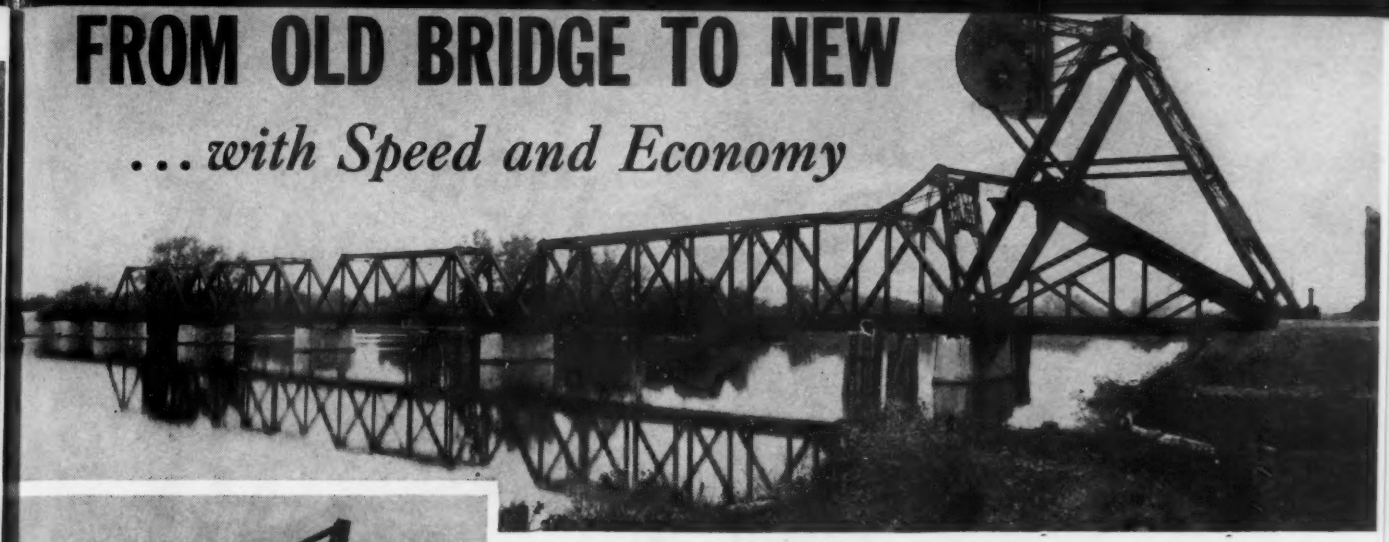
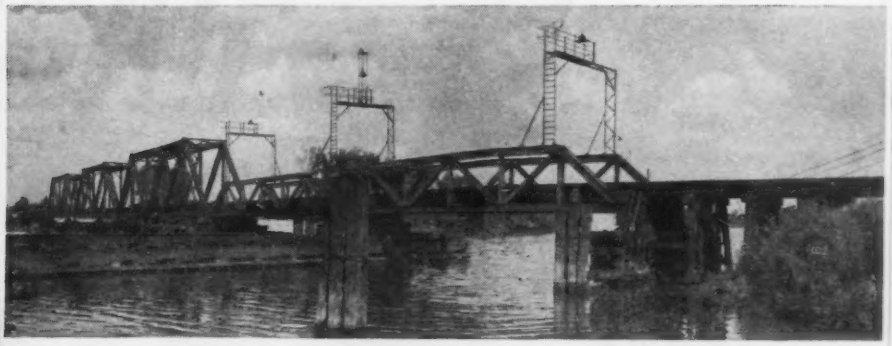
FROM OLD BRIDGE TO NEW

...with Speed and Economy



NEW SAGINAW RIVER BRIDGE, looking downstream. It is 738 feet, 7 inches long between abutment back walls, and comprises two new deck plate girder spans, each 62 feet, 3 inches long; three through truss spans (106 feet, 10 inches; 111 feet, 6 inches; and 125 feet, 9 inches long, respectively); one 172-foot bascule span with tower span 82 feet, 4 inches long. The three truss spans, reclaimed from the former bridge, were cut loose from the old structure and shifted as a 470-ton unit by means of rollers supported on falsework decking.



← **LOOKING UPSTREAM** at the new Abt-type bascule unit. Upon completion of the 82-foot, 4-inch "A" type, counterweight tower span, the 172-foot bascule leaf was erected in open position so as not to interfere with river navigation. Old swing span in background.

↑ **OLD BRIDGE** looking downstream. Its three throu truss spans were flanked by two swing spans bu in 1893. Contrast the outmoded swing span a divided channels, each about 65 feet wide, with new, clean-cut bascule span which provides 1 foot navigation clearance.

ONLY 14 hours' traffic interruption was required to put in operation this new Saginaw River Bridge at Saginaw, Michigan, for the Pere Marquette Railway Company. It replaces an older structure which was located 37 feet upstream and of inadequate capacity excepting for three through truss spans, originally fabricated, in 1923, by American Bridge. These three spans were reclaimed and used in the new bridge. Minimum traffic interruption was achieved by completely erecting all new steelwork prior to shifting the reclaimed spans to the new alignment.

The construction of the new bridge —ingeniously planned and engineered for modern E-72 loading—incorporates newly fabricated plate girder approach and Abt-type bascule units, supplemented by the three reclaimed truss spans.

The entire ready-for-service superstructure was under contract to American Bridge Company. It involved fabrication of 710 tons of new steel; the erection of 1,247 tons of steelwork and other materials, including machinery parts, counterweight, operator's house and electrical equipment; and the placement of ties, rails, guard timbers, etc., for track decking of the bascule unit. Also under contract was the complete removal, cutting into blast furnace scrap lengths, and loading on cars of the two swing spans from the old bridge.

Whenever you plan roadway improvements to meet the increasing demands of heavy power, traffic density and high-speed operations, the wide experience of American Bridge Company is at your service.

AMERICAN BRIDGE COMPANY

General Offices: Frick Building, Pittsburgh, Pa.

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UNITED STATES STEEL

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...another reason why it's wise to install

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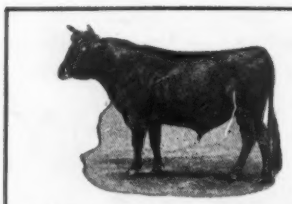
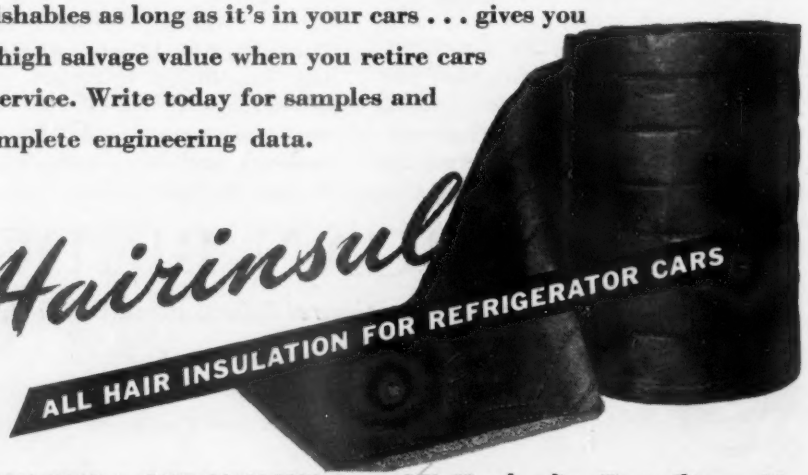
the permanent refrigerator car insulation

Since HAIRINSUL'S *natural* insulating efficiency is so *long lived* that it outlasts the cars it insulates, we will buy back all used HAIRINSUL at the prevailing price of hair. The *all-hair* body of HAIRINSUL never wears out in normal use, never shakes down, never pulverizes, rots or decays . . . gives permanent protection to perishables as long as it's in your cars . . . gives you a bonus in the form of high salvage value when you retire cars from service. Write today for samples and complete engineering data.

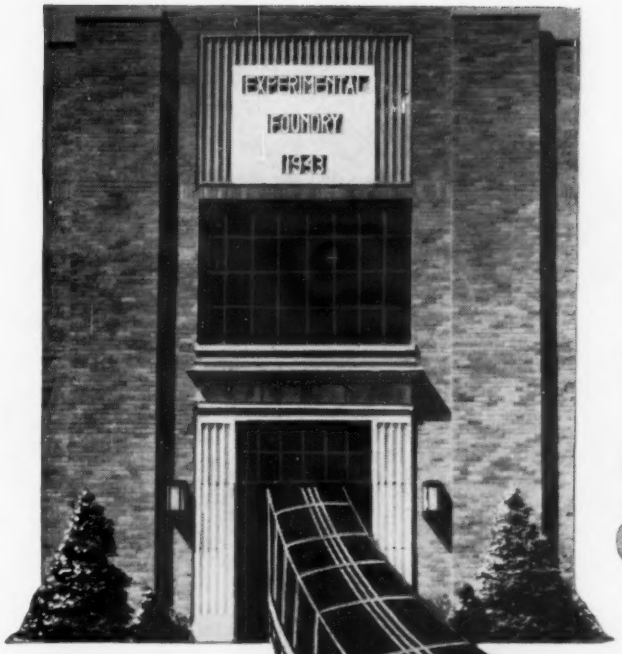


Hair Is Nature's Own Insulation...

It's nature's protective covering for animal life...it's a barrier against extreme outside temperature changes. HAIRINSUL is made of animal hair...one of the best reasons why HAIRINSUL is accepted as the finest of all insulating materials for refrigerator cars.



AMERICAN HAIR & FELT COMPANY, Dept. C-11, Merchandise Mart, Chicago 54



OUT OF OUR RESEARCH LABORATORIES MAY COME THE ANSWER TO YOUR BEARING PROBLEMS

Here's help in finding tougher, longer-wearing bearings and bronze parts for any problems and applications.

We are eager to work with you hand-in-hand and perfect better alloys and designs to keep pace with the progress of the railroad industry which we have served for 71 years.

Our metallurgical laboratories, experimental foundry, and our staff of research engineers are at your disposal.

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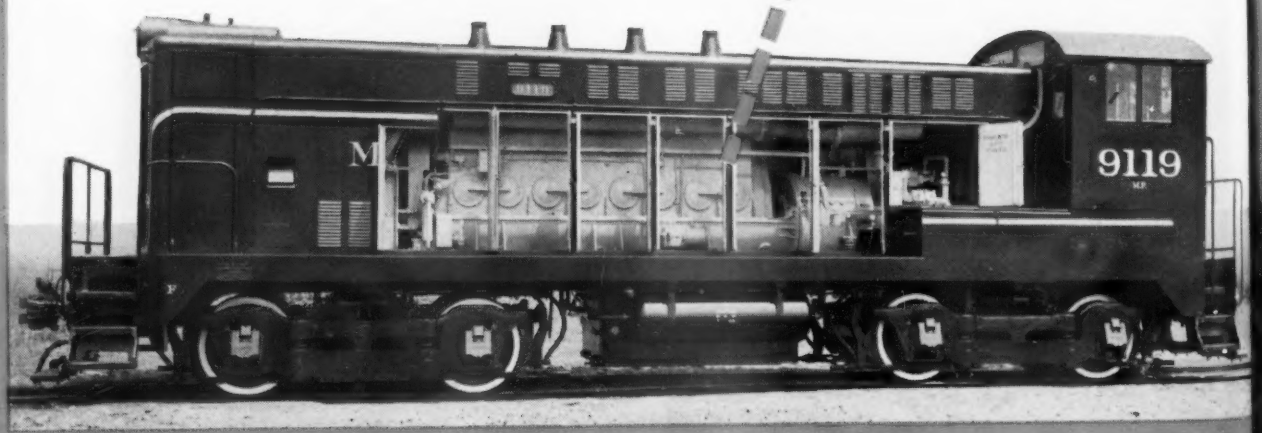


Baldwin-Westinghouse Diesel Electric Locomotives are designed and engineered for long service . . . *and for short servicing.*

Each point that requires lubrication, routine inspection or minor adjustment is readily accessible to the maintenance man, making it easy to keep the equipment in tip-top condition.

All this contributes to the high availability that pays out in around-the-clock operation on leading railroads where Baldwin-Westinghouse Diesel Electrics are serving.

These locomotives offer an unusual variety of exclusive features that improve starting and running characteristics. Find out about them before you buy your next locomotives.

THE **BALDWIN-**
LOCOMOTIVE WORKS, PHILADELPHIA

BLW THE BALDWIN GROUP

WESTINGHOUSE ELECTRIC CORPORATION

Westinghouse

ELECTRIC CORPORATION, EAST PITTSBURGH, PA.

Heading for Home

Know what the railroads are doing — now that the war is over?

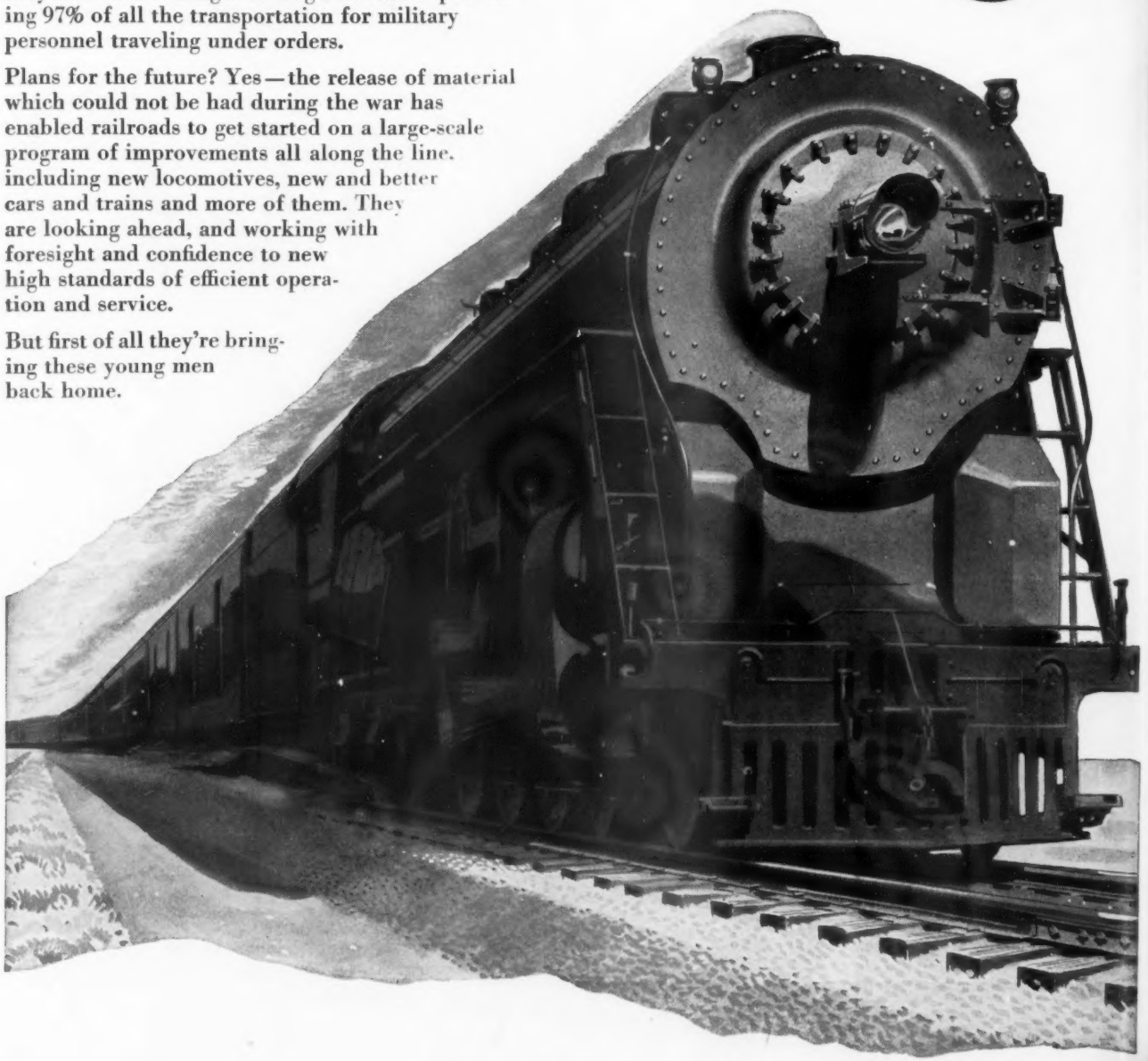
They're moving troops! West Coast, East Coast, up and down and across the country — *more troops are moving right now than at any time during the war* — 1,300,000 in November with still more coming in December, and it's going to be much like that for several months to come.

But this time they're headed mostly toward home, and although the job of handling so many in such a short time is another challenge, it's a job the railroads tackle with enthusiastic determination. Still in their fighting togs, they will keep right on — as they have done straight through the war — providing 97% of all the transportation for military personnel traveling under orders.

Plans for the future? Yes — the release of material which could not be had during the war has enabled railroads to get started on a large-scale program of improvements all along the line, including new locomotives, new and better cars and trains and more of them. They are looking ahead, and working with foresight and confidence to new high standards of efficient operation and service.

But first of all they're bringing these young men back home.

The discharged veteran wears this emblem. Remember his service and honor him.



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— CARRIED MORE THAN 90% OF ALL MILITARY FREIGHT AND PASSENGERS —

Putting the FINGER *on Potential Rail Failures*

Maximum Rail Safety Is Assured by Sperry Service for Testing Rails in Track

High train speeds and peacetime improvement programs call for maximum track safety by periodically weeding out defective rails. No one will ever know the accidents and delays avoided, the destruction and expense prevented by the removal from track of defective rails found by Sperry Cars. Yet it is certain that by eliminating 50,000 hidden defects annually, the eighty railroads using Sperry Rail Service make important savings.

Track safety demands thorough rail testing which is possible only by the best detector car equipment. Detector cars operated by Sperry Rail Service have reached their superior efficiency through fifteen years of constant research and improvement.

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Devoted exclusively for more than

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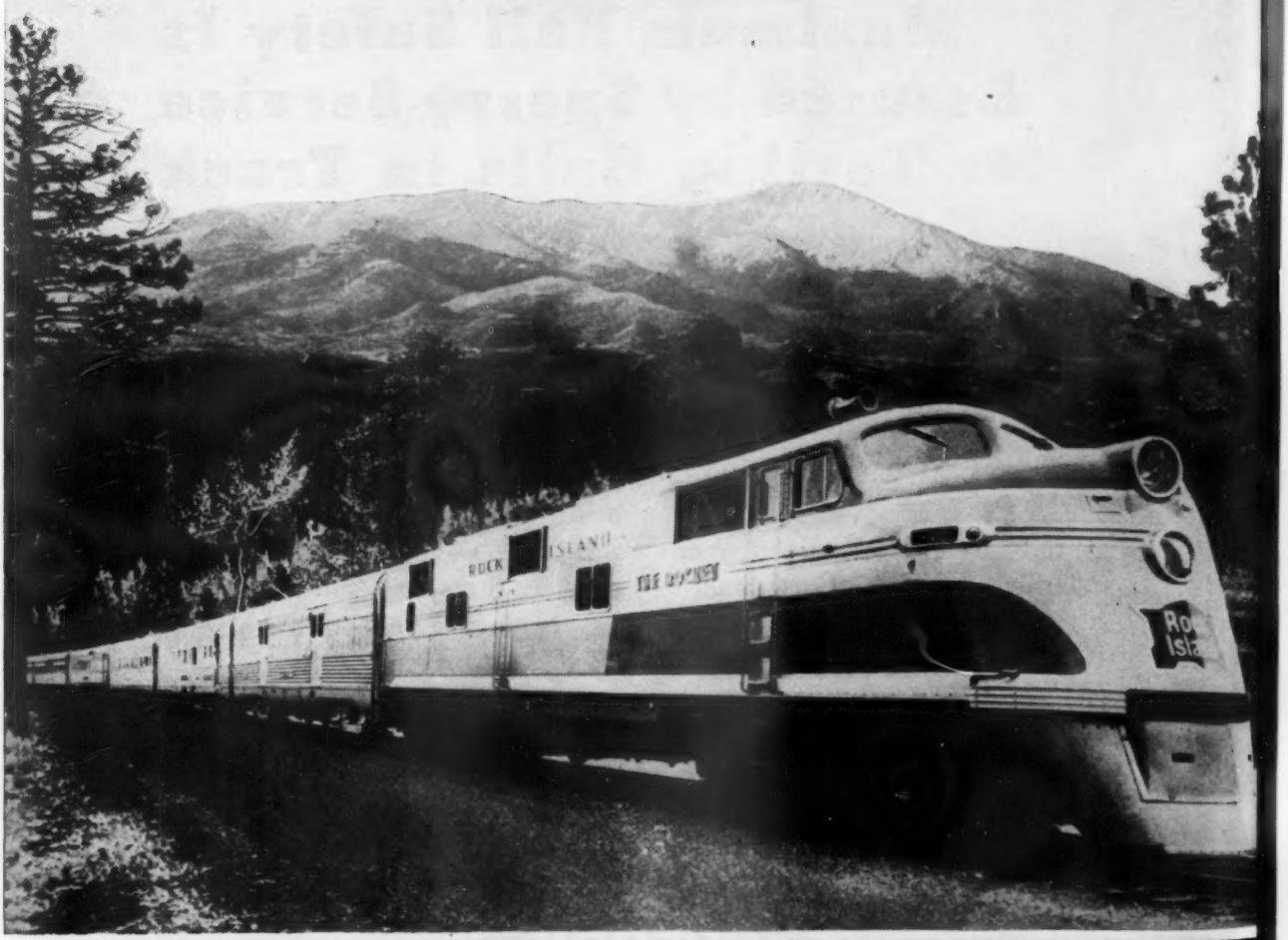
DESIGN, MANUFACTURE and SERVICING

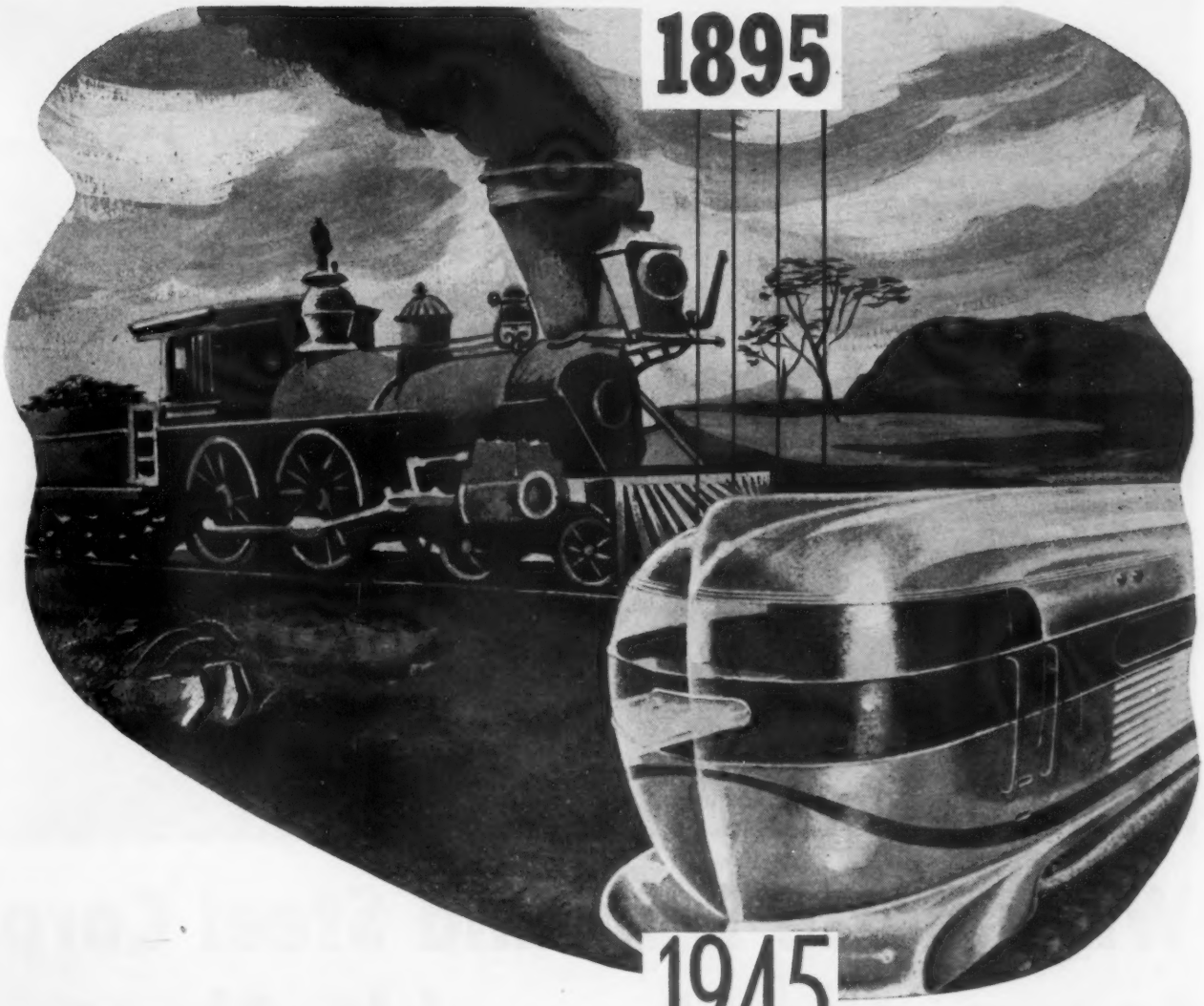
of

RAIL JOINTS



THE RAIL JOINT COMPANY Inc.

50 CHURCH ST. NEW YORK 7, N. Y.



our 50TH ANNIVERSARY

OF SERVICE TO AMERICA'S RAILROADS

"Quality Products" has been our slogan ever since we had the privilege of providing the railroads with the first Lateral Motion Device back in 1895. We plan to continue following the same slogan in the years ahead and one item in this plan is the

BARBER STABILIZED TRUCK

of which over 100,000 car sets have now been supplied to 56 different railroads and private car lines. For outstanding service, it is the truck you should specify!

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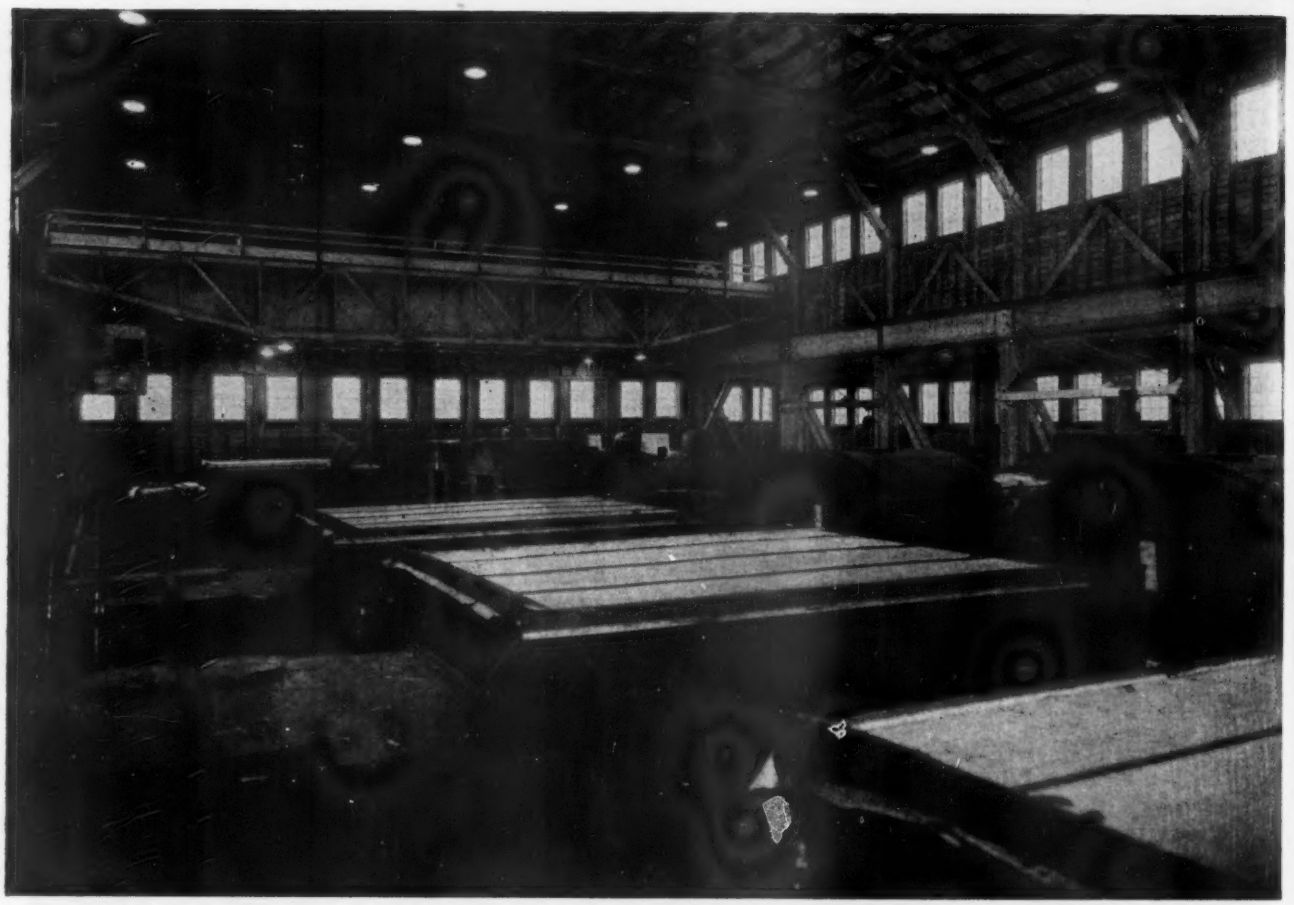

Willamette Iron and Steel Corp. Locomotive Assembly Shop...

ERECTED WITH TIMBER STRUCTURES

The Willamette Iron and Steel Company's Locomotive Assembly Shop demonstrates the versatility of Timber Structures in the railroad industry.

Erected for the purpose of assembling locomotives for lend-lease shipment to Russia, there were five main requirements for this structure:

1. **Wide span:** (Eighty-six) feet in the clear— no interior columns.
2. **Strength:** Roof structure and craneways adequately designed to approved timber engineering standards.
3. **Acid Resistant:** Constructed of Durable Douglas Fir—unaffected by the acid laden, metal corroding fumes of locomotive smoke.
4. **Speedy Erection:** Made possible by *prefabrication* of modern Arch Teco trusses.
5. **Economy:** An efficient, serviceable shop at a *minimum cost*.

According to Mr. Austin Flegel, president of Willamette Iron and Steel Corp. "We are most pleased with the manner in which Timber Structures Inc. worked with our engineers in designing and building the trusses used in our Locomotive Assembly Shop. We do not believe it possible to have secured a better, speedier or more economical job. The installation has lived up to our expectations in every detail!"

Our engineering and architectural staffs are equipped to assist railroad engineering departments in the developing of structures to meet any specific construction problem.

May we consult with you?

Engineering in Wood

TIMBER STRUCTURES
WARD MAYER
INCORPORATED

SALES OFFICES IN PORTLAND, SEATTLE, SAN FRANCISCO, NEW YORK

2¾% Nickel Steel locomotive rods, one bent cold to show ductility.

QUENCHED AND TEMPERED NICKEL STEEL FORGINGS COMBINE

EXCEPTIONAL DUCTILITY WITH HIGH TENSILE STRENGTH

Composition and Typical Properties of Normalized Quenched and Tempered 2¾% Nickel Steel Rods

Description	Yield Pt. No Lbs. per Sq. In.	Tensile Strength Lbs. per Sq. In.	Elong. % in 2 In.	Reduction in Area %	ANALYSIS					
					Car.	Mang.	Phos.	Sul.	Sil.	Ni
Main Rod....	92900	110000	25.0	64.4	.31	.78	.027	.026	.25	2.75
Main Rod....	86500	104500	25.5	65.6	.32	.86	.034	.032	.29	2.69
Main Rod....	86360	104400	26.0	64.8	.32	.86	.034	.032	.29	2.69
Main Rod....	87850	102350	26.0	66.2	.31	.89	.037	.025	.32	2.69
Front Rod....	86000	102250	25.0	67.3	.29	.82	.035	.027	.24	2.71
Front Rod....	83900	104250	25.0	66.1	.29	.82	.035	.027	.24	2.71
Front Rod....	86850	104250	27.0	66.1	.32	.86	.035	.025	.30	2.65
Front Rod....	89500	107050	25.5	65.6	.32	.86	.035	.025	.30	2.65
Back Rod....	89500	107650	25.0	62.7	.30	.79	.030	.025	.22	2.71
Back Rod....	87500	106450	25.0	65.4	.29	.82	.035	.027	.24	2.71
Back Rod....	87000	105600	25.0	65.4	.29	.82	.035	.027	.24	2.71
Back Rod....	88150	104850	26.0	66.8	.29	.82	.035	.027	.24	2.71

Specimens Taken from Mid-Section of Prolongations of the Forgings

The above table compiled by the American Locomotive Company shows the chemical compositions and mechanical properties of some normalized, quenched and tempered nickel steel front, main and back rods recently produced as replacement rods for locomotives being speeded up and rebalanced. These values are typical of replacement rod forgings recently tested by that company.

Quenched and tempered nickel steel forgings of this type provide high tensile strength and ductility, combined with unusual toughness and high fatigue strength—qualities which tend to obviate breakage when employed as rods in railroad service.

Now that the war is over and the War Production Board has revoked all restrictions concerning nickel, we wish to express to the Coordinated Mechanical Associations our thanks and appreciation for the fine cooperation extended in meeting the many unusual conditions which arose.

Our production facilities, as well as our current stocks, are ample to meet the needs of industry. Our sales and technical divisions are eager to be of service to you again in the use of our various products.

THE INTERNATIONAL NICKEL COMPANY, INC., *67 Wall St., New York 5, N. Y.*

WE DON'T LET 'EM DOWN WHEN THE TEMPERATURE GOES UP!

Sturtevant Air Conditioning Makes High Temperature Shut-Offs A Thing of the Past!

HERE IS AN AIR CONDITIONING SYSTEM that will keep running *without interruption* – even when you're operating in the highest ambient temperatures to be found in the United States. You can forget about exceptionally high outside temperatures – such as you find in the southwest–that would ordinarily cut-out the system.

With the Sturtevant Evaporative-Condenser Unit, an extra cooling effect produced on condenser coils liquifies the Freon gas inside, and reduces pressure to a level well under safety limits. Suspended underneath the car, the Evaporative-Condenser sprays large quantities of water over the coils, then evaporates the water with a blast of air. Built for continuous operation over great distances, the unit is provided with a 175-gallon stainless, leak-proof, steel tank which supports a motor driven pump.

This Unit is but one of several new types of Sturtevant Railroad Equipment. Whether your operations demand simple pressure ventilation or a complete air conditioning system, it will pay you to talk with a Sturtevant Engineer.

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Division of Westinghouse Electric
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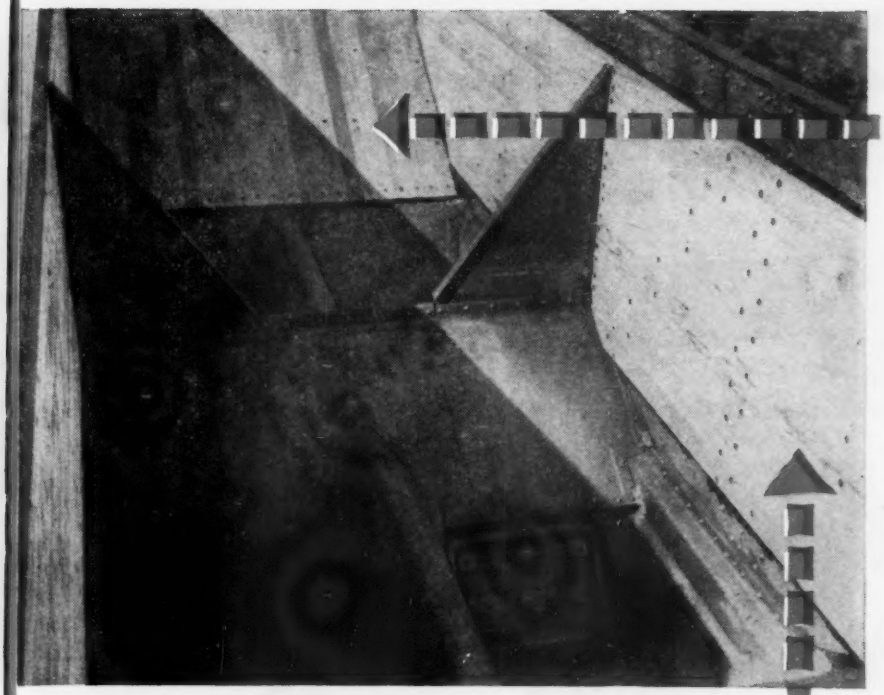
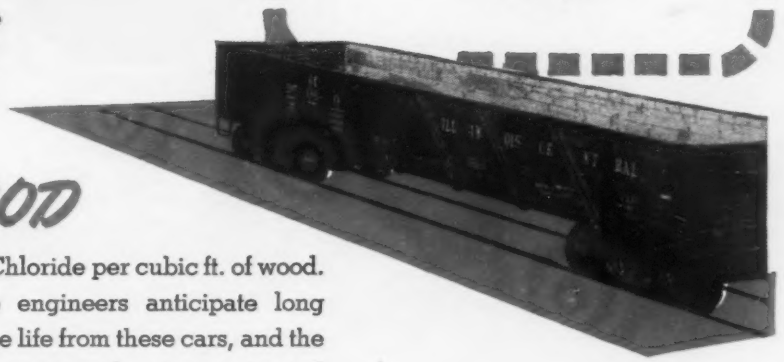
2. Equipment designed for easy maintenance.
3. Equipment designed for minimum space and weight.
4. Equipment that requires a minimum power load.

Sturtevant
Puts Air to Work

STURTEVANT "Railvane" Units or Systems are used by 40 railroads and are covered by more than 80 issued patents and patents pending



500 Coal Cars equipped with "Life Preservers" by the Illinois Central Shops



KOPPERS PRESSURE-TREATED WOOD

This composite hopper-bottom car is one of 500 coal cars built at the Centralia, Illinois shops of the Illinois Central Railroad, in which pressure-treated wood was used for composite bottoms and sides.

Dense short-leaf yellow pine, pressure-treated with creosote to a final net retention of 6 lb. per cubic foot, was installed in the car bottoms. Sides, which were also dense short-leaf yellow pine, were pressure-treated with ¾ lb. Chromated Zinc Chloride per cubic ft. of wood.

The engineers anticipate long service life from these cars, and the performance of pressure-treated wood in other applications certainly justifies this expectancy. Wherever car material, notably decking, must take severe mechanical punishment or is subjected to decay, pressure-treated wood has given from two to three times the service of untreated material. Many so-called "mechanical" failures are actually induced by decay, which is combatted by proper treatment. The treated wood is not subject to corrosive attack, first cost is low, and maintenance is held at a minimum.

We will be glad to send you information on typical treatment specifications used by representative railroads, if you will write.

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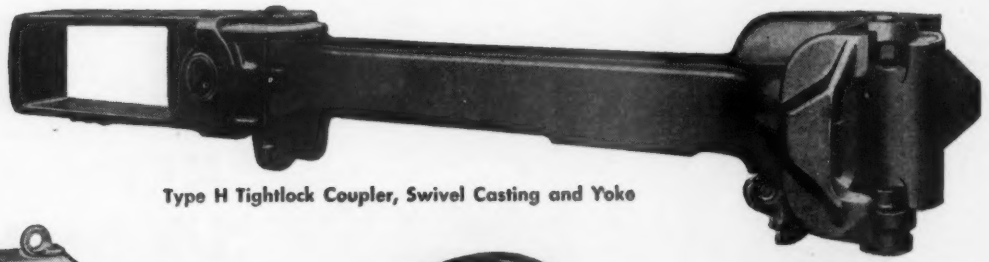
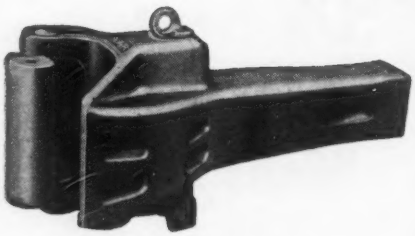
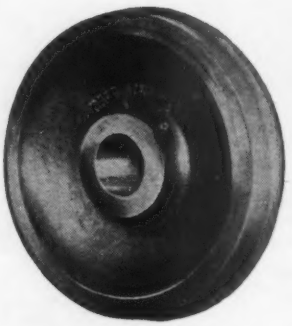


Type H Tightlock Coupler, Swivel Casting and Yoke



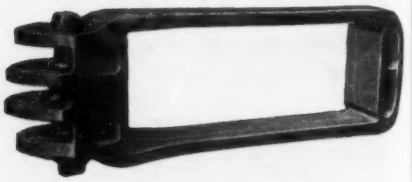
A. A. R. Std. E. Coupler



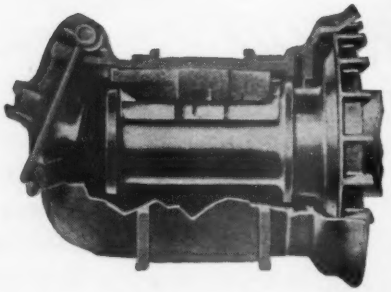
Naco Spun Steel Car Wheel

A. A. R. Alternate Std. E. Coupler

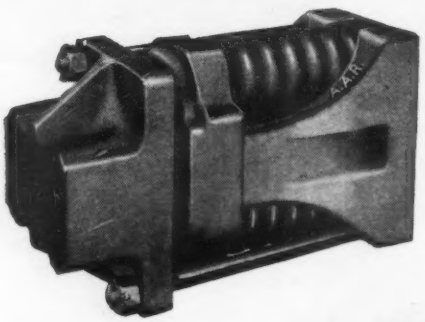
A. A. R. Std. Vertical Plane Horizontal Key Yoke



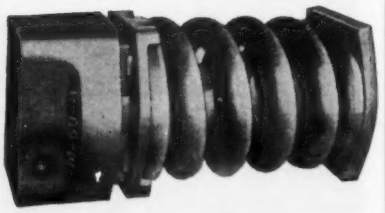
A. A. R. Alternate Std. Vertical Plane Swivel Yoke



National Journal Box with Deflecting Fan and Flexo No. 2 Lid



M-17-A Draft Gear
A. A. R. Approved



M-50-B Draft Gear
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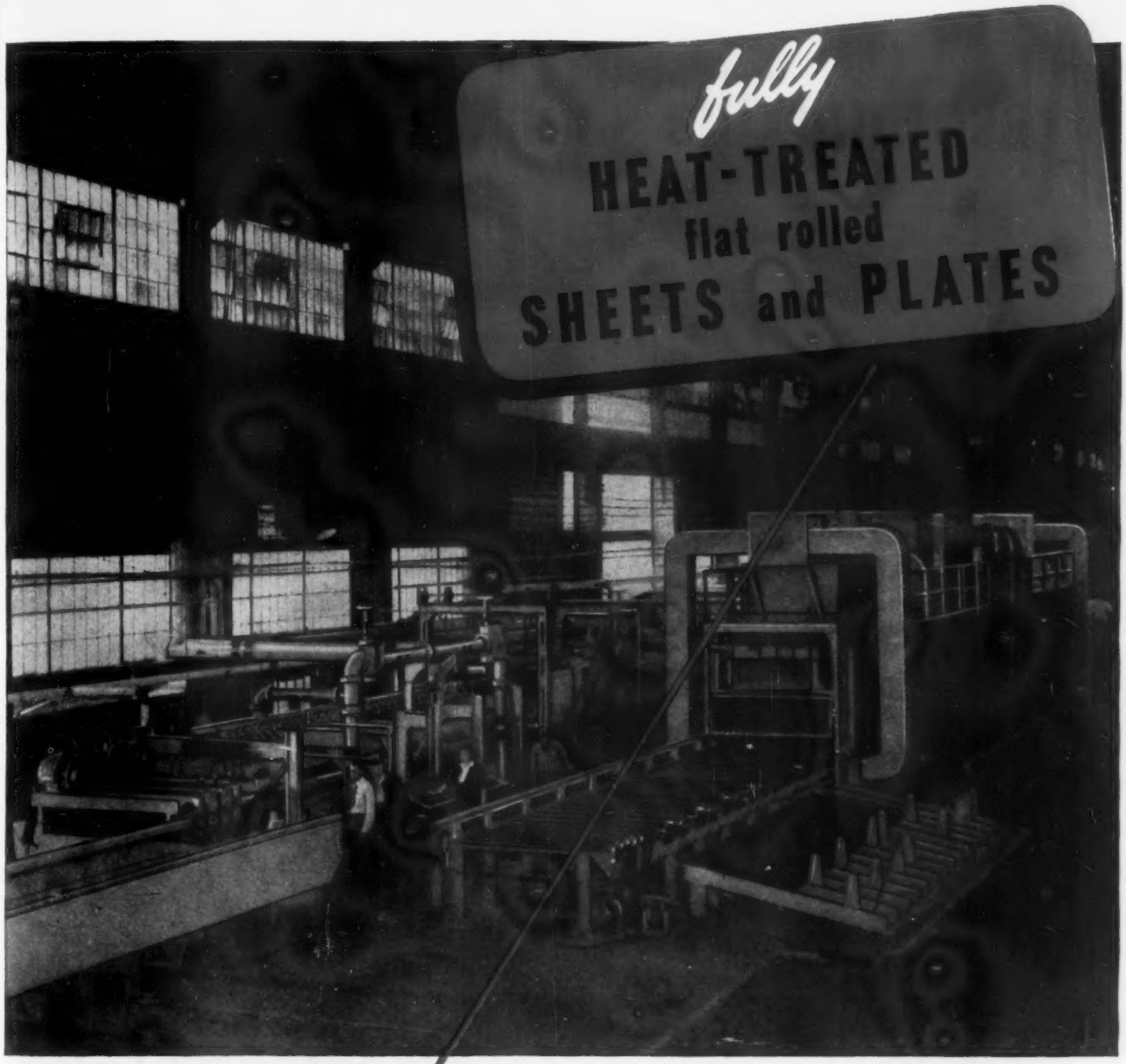

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Absorbing the shocks—

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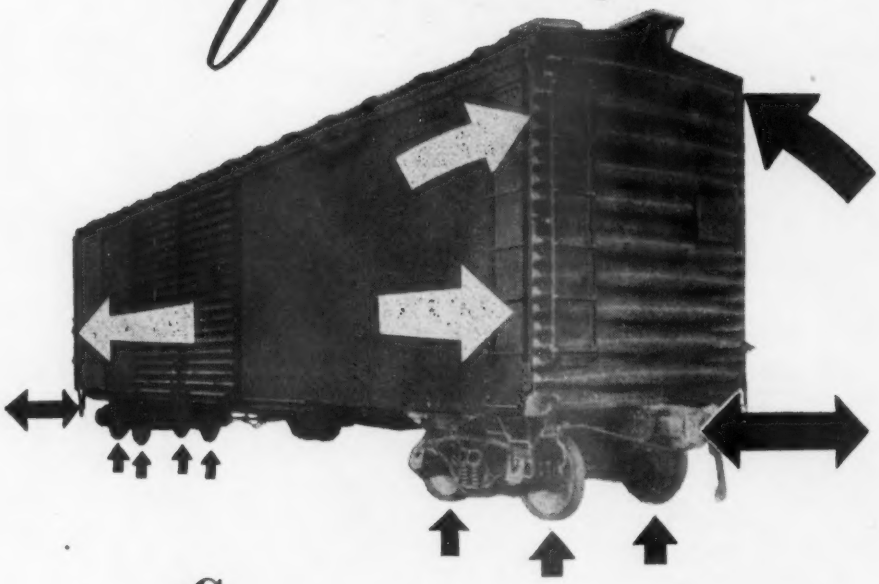

Cardwell and Westinghouse Friction Draft Gears and Bolster Springs absorb and reduce shocks from *every* direction—buffing, starting, roadbed shocks and side sway—increasing the safety of car movements and preventing damage to cars and ladings.

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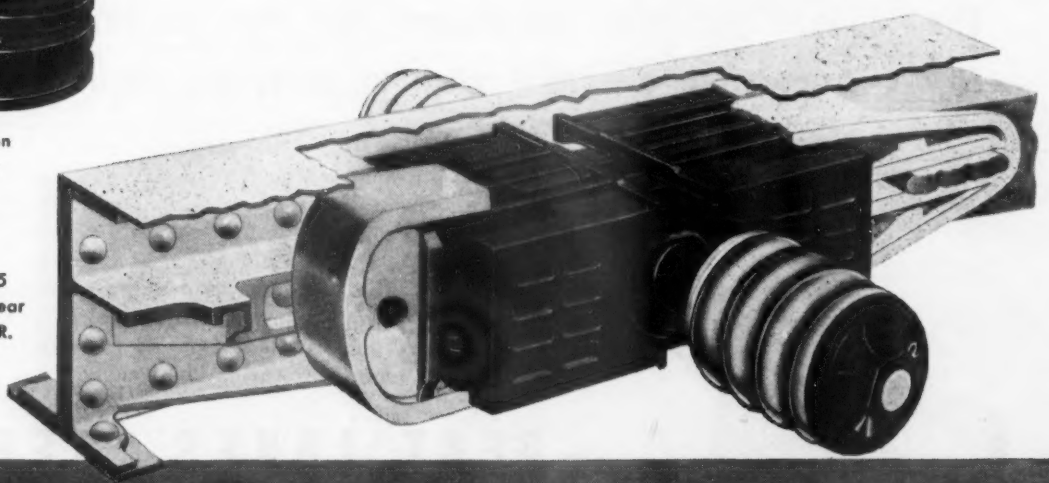

Cardwell M-25 Friction Draft Gear Certified A. A. R.

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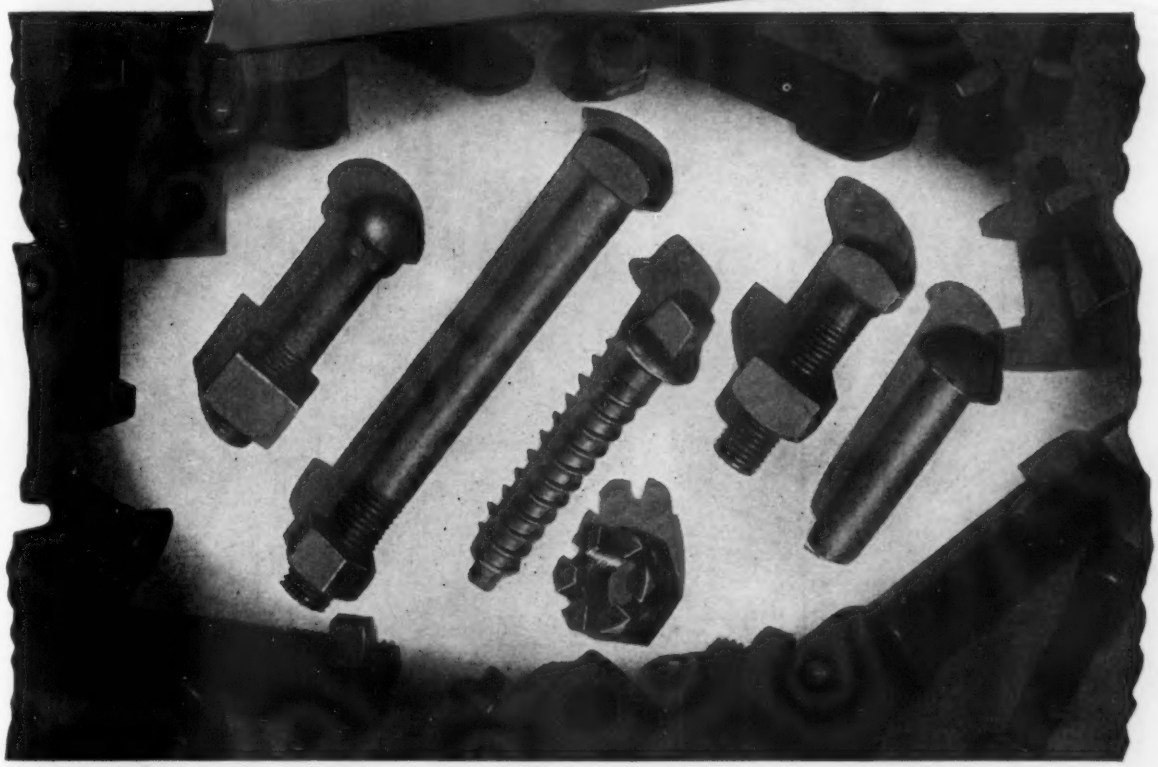

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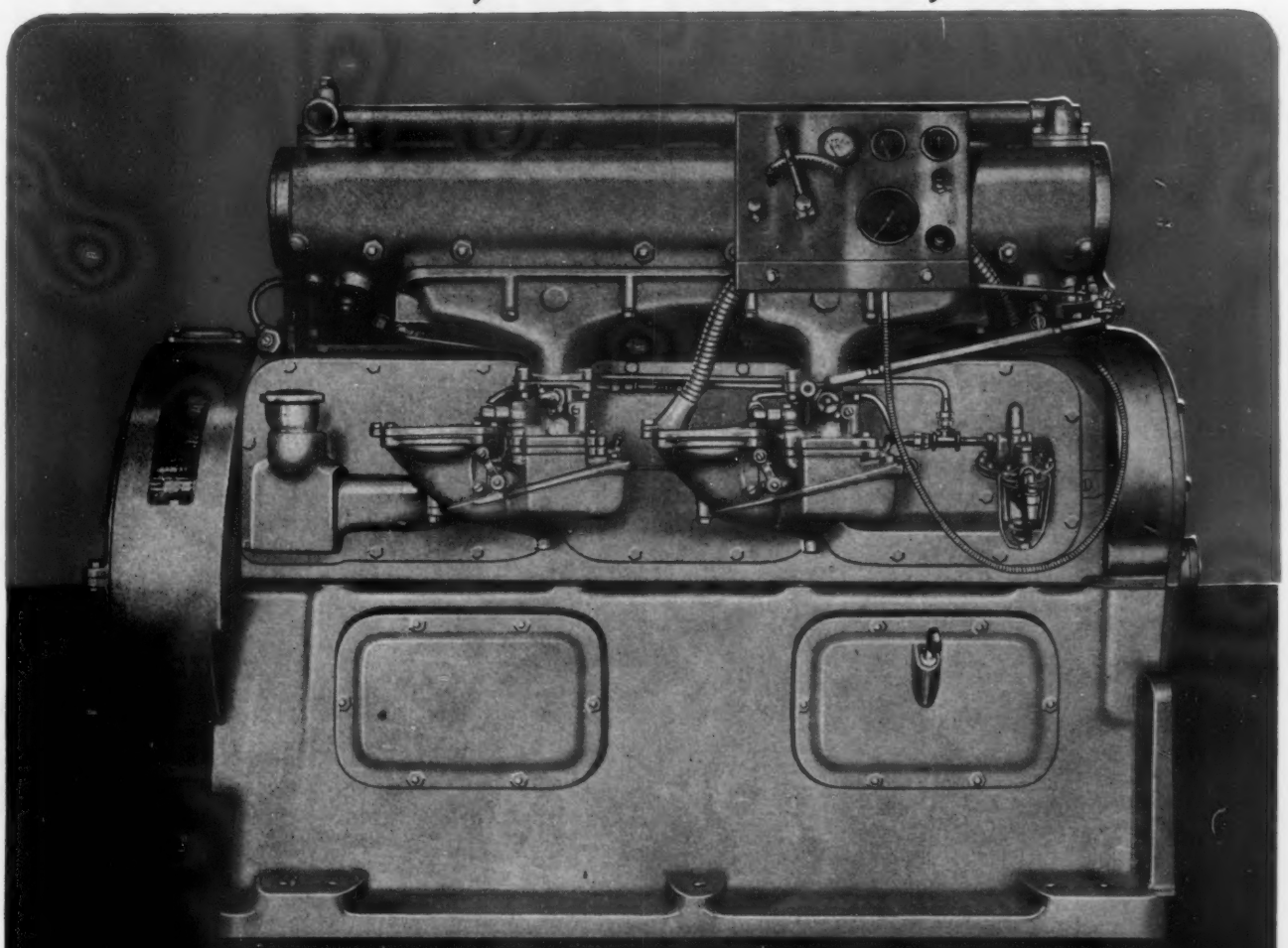

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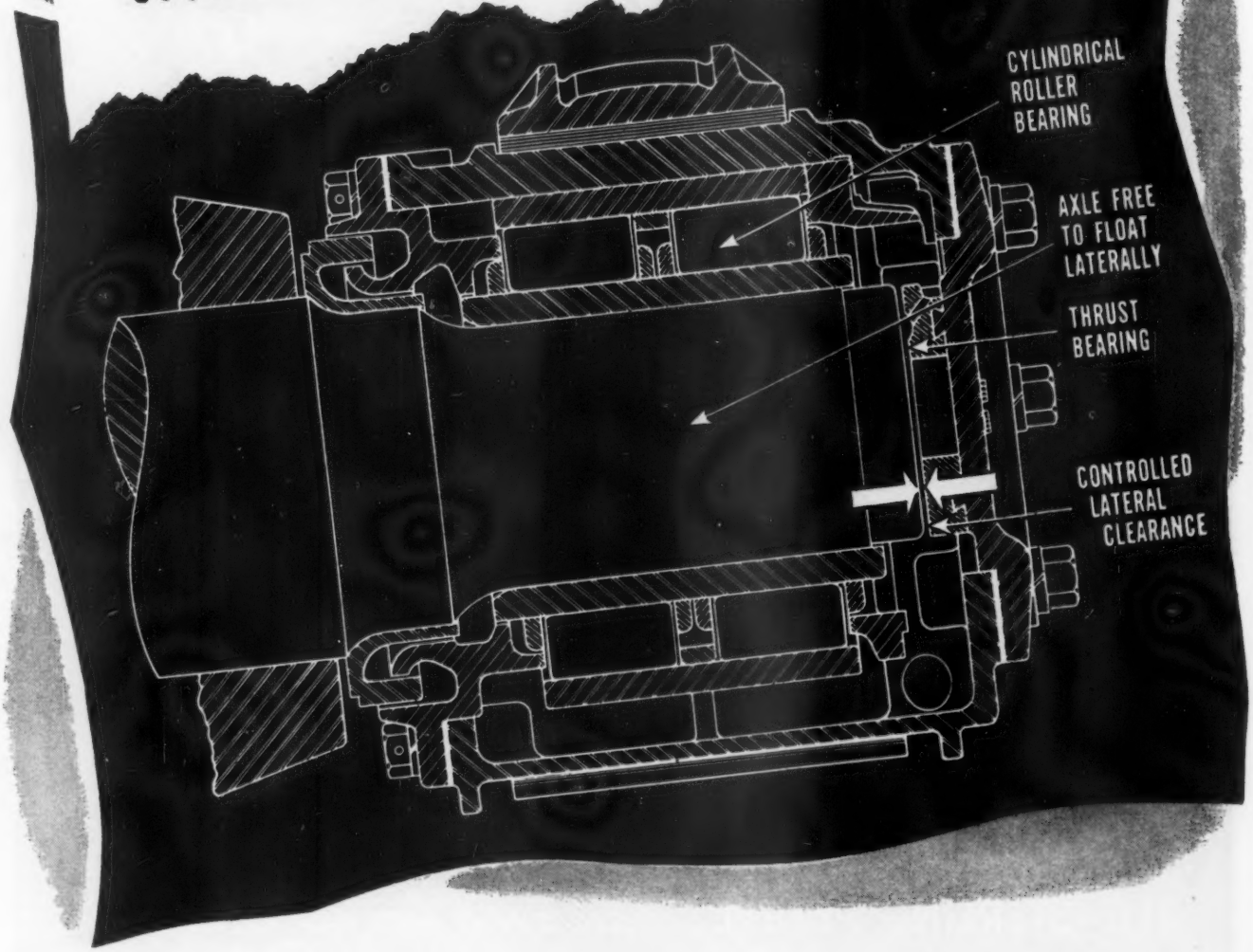

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Railway Age

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Vol. 119 November 24, 1945 No. 21

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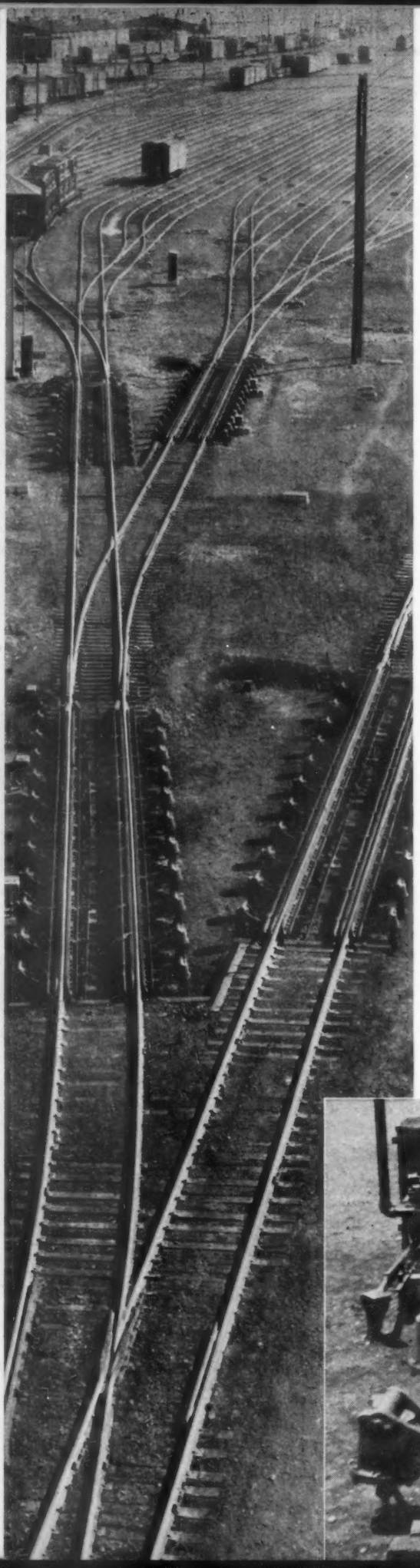

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15 years Service in 5

for "UNION" Car Retarders

When the first "Union" Electro-pneumatic Car Retarders were installed, no one could foresee the tremendous volume of traffic that railroads have been called upon to handle during the past five years.

Nevertheless, these Retarders have met all requirements. Day after day—in many yards 24 hours every day, they have taken the pounding of heavy freight cars, with minimum maintenance and few repairs beyond the replacement of worn brake shoes.

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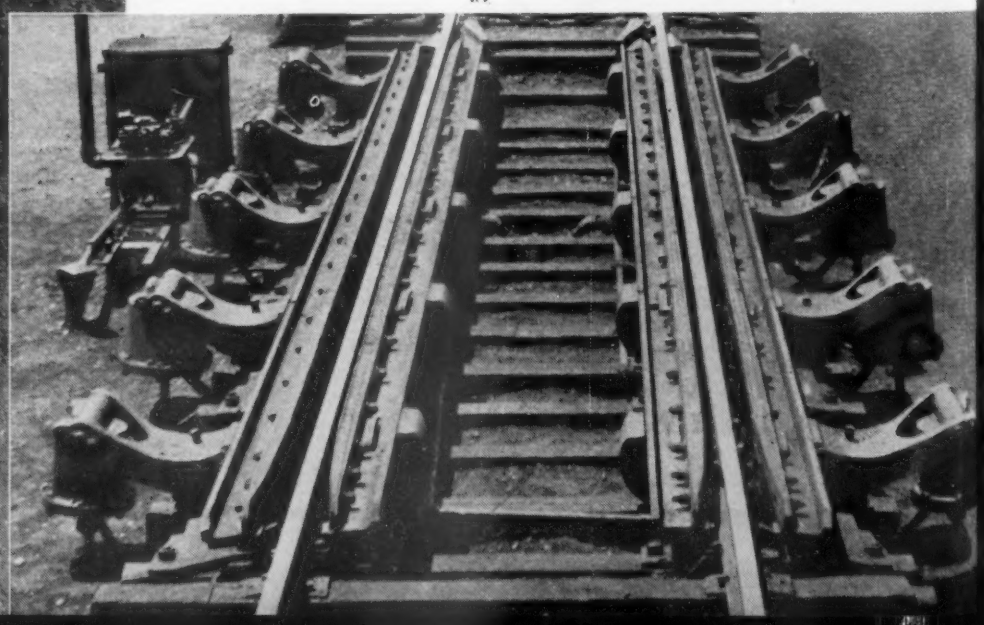

The Week at a Glance

TAKEN FOR GRANTED: The top men in the Army are fully aware of the importance to national defense of a highly developed national railroad transportation plant with sufficient reserve capacity to meet sudden strains if military necessity imposes them. These Army spokesmen have paid high tribute to the railroads' contribution to the winning of the war just ended. But the trouble is, as the leading editorial this week points out, that the readiness of the railroads to meet the needs of the armed forces in time of emergency has come to be taken as a matter of course, as something that need not be planned for. So the Army proceeds to turn on the heat to promote the interests of commercial aviation, to develop deeper and wider waterways for the benefit of a few strategically located industries, without exhibiting any concern over the welfare of the fundamental element in the national transportation service. The question is: How long can the railroads continue capable of producing what the Army has come to expect of them if rival forms of transportation continue to receive so much assistance from the public purse?

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COERCIVE "BARGAINING": What the dominant leaders of some of the unions like to speak of in tones of unctuous reverence as collective bargaining really is, as they exercise their obligations of leadership, nothing of the sort—it is merely a rude exercise of old-fashioned brute force. There can be no bargain, as an editorial herein emphasizes, unless *both* parties have some freedom of action, some choice of alternatives, and doubt is expressed as to how private enterprise can continue to function if actual collective bargaining does not prevail. The alternative to private enterprise is of course socialization of industry in some form—government operation, that is—a prospect the unions can scarcely enjoy, for with its coming would go most of their "rights," including the right to strike.

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SHOP FIRE PREVENTION: An article in this issue reviews in some detail some principles of design and construction that should be followed in building or remodeling shops for maintaining and repairing Diesel-electric locomotives in order that the possibility of fire damage to structures and equipment may be made as remote as care and experience can make it. In addition, protective devices and apparatus are suggested with a view to preparedness for such fires as may occur in spite of skillful planning and good housekeeping.

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NOT PROVEN: The Department of Agriculture hasn't shown any signs recently of being unfriendly to commercial aviation, but it has just succeeded in pouring a little cold water on some of the fantastic predictions of enthusiasts who have visions of cargo carriers darkening the sky, in a year or two, just like starlings seeking shelter at eventide. These prophets would have it that all long-haul fresh fruit and vegetable traffic will move by plane, but the government men have their doubts about that, as is reported this week in the news pages. If specially choice specimens of produce are specially wrapped and packed, and put on sale with enough glamor and snob-appeal, they'll sell the first time at a higher price, but several questions are raised. Will the demand continue at prices high enough to meet air transport rates? Will a sufficient volume of extra-fancy products be available? And can't the same packaging and selling stunts be used with produce hauled on the ground? Looks as if the air-freight fans will have to perform another experiment to get better than a Scottish verdict: not proven.

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SLEEPER SHORTAGE: Speaking pretty plainly for a government department, the Army has called public attention to the fact that one of the most important reasons why service men coming back to this country from overseas sometimes have to ride for more than 48 hours in coaches is its inability to get delivery on 1,200 new troop sleepers that have been held up for weeks by strikes. The real seriousness of the situation is evident in the latest O. D. T. order, which actually requires the air lines operating eastward from the Pacific coast to devote part of their capacity to moving troops, even though they are thus for once forced to get in the same boat with the railroads when it comes to disappointing and inconveniencing non-military travelers.

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RULES FOR RADIO: The regulations proposed by the F. C. C. for railroad radio service are set forth herein in a feature article. Requirements for licenses, forms of application for licenses, technical specifications, testing standards, and the nature of records to be kept are among the subjects covered by these rules.

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FLUORESCENT LIGHTING: Technical considerations to be weighed in planning fluorescent lighting of passenger cars are set forth in an article by William W. Garstang, president of Electronic Laboratories. Advantages and peculiarities of four types of electric current conversion systems are discussed, along with the basic requirements peculiar to installations in various types of cars.

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NEW AUTO RATES: The long-pending controversy over maximum freight rates on new automobiles has reached a new stage with the latest I. C. C. report which, in effect, authorizes an increase of around 13 per cent in previously established rates, with a 10,000 lb. minimum carload weight. But Commissioner Mahaffie, as this issue's news pages report, suspects the automobile makers of viewing a relatively high "paper rate" with some complaisance, in view of the pricing practices followed in that industry. The rates on which automobiles actually move, particularly from assembly points, generally are substantially lower, he points out. And he wonders whether the commission is justified in establishing a high rate basis that is of no benefit to the carriers but is used by manufacturers as a means of fixing a "fictitious" retail price on their product.

A DIFFERENT ENVIRONMENT: The essential driving force of private enterprise is *profits*, and incomes derived from those profits. But the essential philosophy underlying the prevailing economic policies of the dominant group in the national government requires rigid restriction or total elimination of these profits—ostensibly to provide more "consumer purchasing power." Profits are taken away in high taxes, and the opportunity to make profits is taken away through the creation of subsidized competitors of private business. The result, as the editor of this paper pointed out in a recent address, published herein, is bound to be increasing inability of a profit-starved private enterprise system to meet the nation's need for production and for employment, and, growing from that impotence, an increasing demand for government spending that can lead to but one end —national socialism. This is the environment in which the railroads enter this postwar era, making the problems they face quite different from those confronting the industry at the end of World War I.

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DIESEL INSTRUCTION: The instruction car for training operating and maintenance personnel to handle Diesel-electric locomotives which was put in service on the Southern's eastern lines this summer is described in an illustrated article this week. Fitted with both freight and passenger equipment, electrical and mechanical, and with charts, models and projection apparatus to facilitate demonstrations, the car is arranged to accommodate classes of 18 or so at a time, and has the none-too-ordinary advantage of being air-conditioned.

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CARS IN DEMAND: The freight car supply situation this year continues to be different from the established pattern, Car Service Division Chairman Kendall reports this week. While usually there is, of course, a definite falling off in loadings, and therefore in the demand for cars, after the fall peak in October, it is expected that loadings this year will continue at a high level right up to the holiday season. This is a result of bumper grain crops, of the return of large amounts of war materials from abroad, and of strikes that have upset the normal processes of industry. Loadings of l. c. l. freight in October were 10 per cent over September, and are running substantially ahead of last year. Congestion at several ports, caused by strikes of dock workers, has slowed up box car turn-arounds, a serious development in view of the current need for such equipment.

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IN BRIEF: The Southern Pacific has decided not to resume operation of its Atlantic coast steamship service. . . . The Rock Island has inaugurated its "Rocket" freight service on the Chicago-Houston run. The trains are being equipped with end-to-end radio communication apparatus. . . . Senator Wheeler has started proceedings to investigate delays in bringing railroad reorganizations to a successful conclusion. . . . The House committee has recommended the Bulwinkle bill, as redrafted, for passage.

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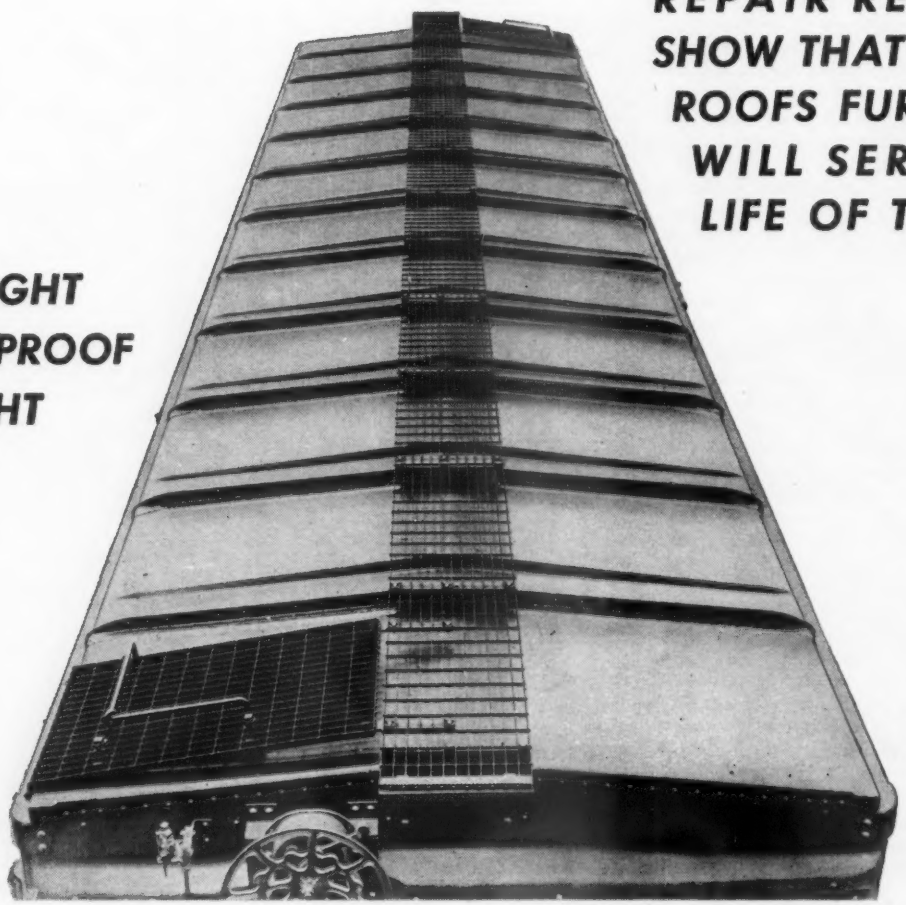

REPAIR RECORDS SHOW THAT 99% OF ROOFS FURNISHED WILL SERVE THE LIFE OF THE CAR

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RAILWAY AGE

The Army and National Transportation Policy

Our Army people are letting it be known that they are doing a lot of planning for the future national defense, which is, of course, exactly what they should do, seeing how far victory in the recent war has failed to restore anything like peace. Central among the statements in which military men are making known their prescriptions for future defense is General Marshall's report entitled "The Winning of the War in Europe and the Pacific." It reveals more significant information of the physical aspects of the recent conflict than any other document so far available. Railroad management ought to have a full knowledge of its disclosures, because much that General Marshall says, and omits to say, has a bearing on railroad managerial policy.

"Two Essentials" to National Defense

On the positive side General Marshall makes the well-sustained contention that "the only effective defense a nation can now maintain is the power of attack." And, he adds, "that power cannot be in machinery alone; there must be men to man the machines; there must be men to come to close grips with the enemy and tear his operating bases and his productive establishment away from him. . . ."

To attain these objectives, General Marshall says there are "two essentials"—(1) intense scientific research and development and (2) a permanent peacetime citizen army. Further on in his report, in discussing the air bombardment of Germany, he observes that "transportation and communications are the life arteries of a modern industrial state engaged in total war"—but his recommendations for the defense of the nation omit any warning to maintain industry and transportation ready at all times, physically and with trained manpower, to take on a load of war-time magnitude.

Surely such a state of preparedness in industry and transportation is quite as requisite to an adequate program of national defense as General Marshall's "two essentials"—intensive research and an adequate army. Probably he failed to mention such preparedness by industry and transportation because he expects that private enterprise will keep this essential part of our defense in readiness, so that only the purely military aspects of a defense program need engage his attention.

If this is what General Marshall believes, then he has not had his attention called to the fact that the railroads of this country stagnated for lack of new investment for an entire decade prior to the recent war; and that they managed to meet the war's demands only (1) because they had had a liberal ingress of new capital in the 'Twenties and (2) because of the providential development of a new technique of carrier-customer-government cooperation which yielded an unprecedented output of transportation service in relation to available facilities. Does General Marshall believe that the railroads will be prepared to cope with the traffic load of another great conflict if their traffic and earnings after the present war should fall back into the stagnant pattern of the 'Thirties? What assurance has he that traffic and earnings will *not* follow the pattern of the 'Thirties—since government policies of aid to rival transportation agencies, and apathy toward the railroads, are exactly the same now as they were in the 'Thirties? In fact, such policies of governmental favoritism of the railroads' rivals are more pronounced than they were in the 'Thirties, and threaten to become still more oppressive. For example, General H. H. Arnold in his report on the air services, released November 12, said:

"Since military air power depends for its existence upon the aviation industry and the air-mindedness of the nation, the Air Force must promote the development of American civil air power in all of its forms, both commercial and private."

No Concern for Essential Transportation

He neglected to say that such promotion of civil aeronautics should be carried on with due regard also to the need of the nation for a vigorous and adequate railroad industry, although General Arnold is as fully aware as is General Marshall of the utter dependence of our military activity upon efficient railroad service—as witness his statement to that effect at the time of the threatened railroad strike at the end of 1943 (*Railway Age*, January 8, 1944, page 154).

These army chiefs are not unmindful of the importance of railroad transportation to national defense, but, like practically all other government officials, they simply take such service for granted. Will it be necessary for the railroads actually to fall down in the work expected of them before anybody in authority in Washington will awaken to the fact that the railroads cannot actually *be* the nation's principal reliance for transportation if all their less useful and even dispensable rivals are given unlimited political assistance to the railroads' detriment? Seeing how badly the Army needs the railroads, does it make sense that it should afflict them as it does with the waterway promotional activities of the Army Engineers; and that it should now undertake parallel promotional effort for commercial aviation, without any systematic policy of subordinating these promotional activities in behalf of a fraction of the nation's transportation to a primary concern for the welfare of transportation service as a whole?

Collective Bargaining

A couple of weeks ago, the president of the Yale & Towne Manufacturing Co. was for several days prohibited by pickets representing strikers from entering the plant of his company at Stamford, Conn. During the same period another large manufacturing company published advertisements in the newspapers, advising its business connections and creditors that it would answer correspondence and pay current bills just as soon as pickets surrounding its main plant would be good enough to permit its office staff to return to their duties. Higgins Industries in Louisiana have voted to liquidate rather than continue to operate under terms dictated to them by the unions.

There was a time when organized labor was insistent upon recognition of the principle of "collective bargaining." The theoretical justice of such an arrangement is persuasively argued from the fact that no real freedom of contract exists when some external compulsive force operates on one of the parties to a contract and not upon the other. The classic example was that of the mill-owner who had at his disposal practically all the available jobs in a town, on the one hand, and the individual employee on the other. The early protagonists of "collective bargaining" pointed out that the individual employee had to make a bargain quickly or starve, while the mill-owner could afford to wait. The job was necessary to the individual employee, but the services of just one employee were not indispensable to the mill-owner. An arrangement whereby those employees of a given plant who wish to do so may unite—so that the employer who has at his disposal most of the jobs in a town faces an organization representing most of the men available to fill those jobs—puts the two parties to a wage and employment contract on approximately an equal footing, and is sound both ethically and economically.

If Americans are to remain free, coercion must not be tolerated in industrial relations—either by denying individual employees the right to organize, so that their empty bellies may force them into a bad bargain, or by permitting gangster methods by unions to coerce an employer into wage concessions which he knows may spell the ultimate ruin of his business, and hence of its ability to provide jobs. The situation which prevails in industrial relations in this country today is not collective bargaining. It is collective coercion, which is just as reprehensible ethically and economically as the coercion which used to be exercised by the anti-union employer who employed goons to keep union organizers out of town while he negotiated individual "bargains" as to wages and working conditions with his defenseless employees. The goons are still on the job, but they are on the picket line instead of opposing it.

Free enterprise cannot in the long run continue to operate under such a system of coercion—because, under such conditions, employers are forced to make concessions which they know to be ruinous. If we had genuine collective bargaining, Higgins Industries, instead of going out of business, would probably have tried to fight the strike which closed its plants. As it is now, employers are seldom if ever given police protection if they seek to break a strike, and they almost never try to do so any more. No matter how unjust or even wholly impossible the demands of a union may be, the only effective recourse left to an employer is to retire from business as Higgins Industries have done. The employer is not a bargainer at all. His only choice is to accede to the demands made upon him or go out of business. Where his industry is too important to be permitted to cease production, the further alternative of government operation is provided.

The nation must soon decide whether it wishes to restore genuine collective bargaining, where the employer is given rights equal to those of the unions with which he deals—or whether it prefers, instead, to have general industrial stagnation or socialization. Continuation of present practices will inevitably produce the latter result.

Why Wait for a Costly Demonstration?

No one can say that the railways are not alert to the danger of fire, particularly from long-known fire hazards. The danger usually lies, not so much in failure to take suitable precautionary measures or in neglect to provide proper protective equipment, once the hazards are recognized, but rather in taking the hazards themselves too lightly. This consideration is raised poignantly by the article in this issue entitled "Fire Hazards in Diesel Shops" by W. S. Wicker, chief engineer, Transportation Mutual Insurance Company.

Some of the newer fire hazards on many roads today arise, unquestionably, from the increasing use of Diesel-electric locomotives—hazards which involve not only the equipment itself, but, as well, many costly structures out on the line and in terminals. As regards the equipment itself, these hazards have usually been recognized from the start, although even here experience gained through increased operation under a variety of conditions has brought to light new hazards which must be guarded against. That there is a growing recognition of these hazards is evidenced amply by the studies that have been and are being made by the Fire Protection and Insurance Section of the Association of American Railroads, and by the fire and insurance officers of many roads. Such recognition is also evidenced in the article entitled "Fire Protection for Diesel Locomotives" which appeared in the *Railway Age* of October 27, describing the various warning and protective equipment installed on Diesel locomotives on the Seaboard Air Line and the Chicago, Burlington & Quincy.

Such reports as these indicate an appreciation of the fire hazards involved in Diesel locomotive operation, but they afford no evidence that there is equal appreciation of the comparable fire hazards involved in the various types of facilities being provided by the railroads for servicing, maintaining and repairing this type of power. Where less than necessary consideration is given to the fire hazards in Diesel shops, it may be because many of the hazards involved in the line operation of Diesels are not present while the locomotives are in a shop, or because of the low volatile character of the fuel oil employed, or because of the generally fire-resistant type of construction being employed in most new shop buildings.

If, however, these factors are considered alone, the hazards involved in the necessary electrical systems

might be overlooked—as well as those involved in acetylene and arc-welding operations; in the fumes inherent in paint and lacquer spraying; from cleaning solvents; and in the flammable vapors given off during oil-reclaiming processes and from the heated oil used in cleaning air and oil filters.

Thus far the railroads have been spared serious fires in any of their Diesel shops, but this does not, of course, mean that such shops are immune from fires. It may be hoped that it will not take a serious shop fire, damaging or destroying equipment worth hundreds of thousands of dollars, to demonstrate facts which should be obvious to those who build and use these shops.

Pooled Cars Do Not Always Move the Fastest

Editorial attention was recently directed in these pages to the intensive use being made of refrigerator cars, the loadings of such cars being considerably in excess of comparable periods a year ago in spite of the fact that fewer of these cars are available than in the former periods.

Like so many of the records with respect to the utilization of equipment—both cars and locomotives—the better use that is being made of refrigerator cars is no doubt due, in part at least, to the pooling of equipment and yet, if the observation of one railroad man is accurate, the same system that has stepped up the movement of cars and kept them moving under load a larger part of the time has resulted in actual delays and increased expense to some individual railroads. To quote, in part, from a letter, the writer says:

"We have a terrific problem in freezing weather, with ensuing delays and incidental costs, because of the necessity of removing ice from the bunkers of refrigerator cars before we can load them. When we had assigned cars they were cleaned out at the start of a season and it was not necessary to do it all over again. The way it is now with the pooled reefers we clean them out and the chances are that when they arrive at their destination they are unloaded, iced up again for some cold car use, then unloaded again and re-appear on the line of a railroad such as ours to be loaded with a commodity, the shipment of which requires that the ice be removed from the bunkers. This is a mighty big waste, as the ice is costly, the labor of icing and de-icing expensive, not to mention the delays to equipment in the process."

Here is concrete evidence of the fact that someone has to pay for the improvements in operating practices that appear in the overall picture as being of definite advantage. All through the war there has been an actual numerical shortage of all kinds of railroad equipment and the only solution to an almost impossible war-time operating problem—that of handling traffic loads far beyond any heretofore accepted standards of capacity—was to adopt every device to get the greatest utilization out of equipment; pooling was one such device.

This also emphasizes two things: that in war-time the job must be done regardless of cost; in peace-time railway operations should be handled as economically as possible. War-time traffic has shown up our definite lack of certain types of equipment. Now that the war is over we should, as soon as possible, build the new equipment that will make it possible for the roads to return to individually more economical operation.

"Go West, Young Man"

At the behest of their supervisory officers some millions of young men, and not a few older ones, went west during World War II and continued until they had reached the far-flung Pacific Theater of Operations. The necessary impedimenta, ordnance and supplies of all sorts followed them in staggering quantities. Early in the war it was realized that the burden upon the railways between Chicago and the Pacific Coast would be far beyond anything that they had ever handled before. Obviously, if indiscriminate routing were permitted to remain inviolate, there would be sporadic but severe congestions on this line or that. Therefore, the Office of Defense Transportation, the Interstate Commerce Commission and the Western Association of Railway Executives created a unique position, and the representative appointed to it was given unique powers in that he represented all three organizations, which gave him practically unlimited scope to determine how traffic should be moved to and from the Pacific Coast. W. F. Kirk, assistant general manager of the Missouri Pacific, was selected for this job of glorified chief dispatcher for many thousands of miles of railway.

Colonel Johnson said, upon the occasion of Mr. Kirk's recent return to his own railroad: "With complete control over the routing of rail traffic west of the Mississippi, he has, for nearly three years, occupied a truly unique position and his record will stand as one of the most outstanding and useful jobs of rail transportation ever performed."

The handling of this huge job was effected smoothly through a system of reports and checks and through the functioning of an advisory committee which enabled the "chief dispatcher" to keep informed at all times as to operating conditions on all western lines and, when necessary, to divert traffic from over-loaded lines to those in position to handle the extra traffic and permit the by-passing of temporarily congested terminals or whole sections of railway temporarily blocked by floods or other emergency conditions.

When the office was created in February, 1943, the monthly movement as represented by the number of cars unloaded at West Coast ports was 30,448. Almost immediately this increased and continued to rise until a peak of 82,859 cars was unloaded at the ports in May, 1945. The handling of this hugely increased traffic was marked by the fine patriotic and unselfish spirit of cooperation of the railways, their employees and shippers and receivers.

Briefly stated, despite all the handicaps of hauling freight cars over the terrific barrier of the Rocky Mountains, over what are largely single-track lines, the railways refused to admit defeat and, consciously or unconsciously, adopted the Navy slogan: "There is no such word as impossible." Having stated that there was no such word, they went out and proved it and produced an unequalled epic of transportation.

Diesel-Engine Parts Are Arranged for Convenient Observation by Students

The Southern Trains Its Diesel Forces

Second instruction car for operating and mechanical personnel goes in service—Actual and model parts which operate, motion pictures, slides and charts used in teaching classes—Car is air-conditioned

A SECOND instruction car for the education of Diesel-locomotive operating and maintenance personnel was placed in service in August by the Southern as a part of its campaign of personnel training in connection with its growing inventory of Diesel-electric locomotives. The first car went into service on the Western lines in June; the new car is presently in use on the Eastern lines. Training of men in the operation maintenance and repair of this type of power is recognized by the Southern as a most important undertaking if it is to achieve maximum efficiency in the use of its Diesels. A foundation step, which has already been taken, was to send the supervisory forces in the mechanical department to LaGrange, Ill., for instruction at the school operated there by the Electro-Motive Division of General Motors. Diesel foremen, general foremen, road foremen of engines, assistant master mechanics, master mechanics, regional and system Diesel supervisors and the three regional superintendents of motive power have all spent two weeks at the school.

Valuable as this training for the supervisors was, the road realized that adequate training of the personnel who operate the locomotives and the men in the shops who repair them was also required. The construction of school cars was studied and decided upon as offering the best means of affording all personnel the opportunity to become familiar with the Diesel-electric locomotive as an operating unit and as a piece of equipment requiring upkeep. The car described here was converted at the Hayne, S. C., shop of the railroad from a 70-ft.,

steel underframe diner and the equipment installed in it was assembled from various shops on the Southern's Eastern lines. In addition to the exhibits in the first car * built which has E. M. D. freight equipment installed for instruction purposes, this car has E. M. D. passenger and Alco equipment as well. It has been designated as Diesel-Instruction Car 1.

Training the Operator

Extensive use is made of cut-away displays of full-size engine and electrical parts to demonstrate to enginemen and firemen what happens under various operating conditions. These also assist instructors in explaining maintenance procedures to mechanical personnel. All electrical equipment found on a passenger or freight locomotive is duplicated on the car and is connected to the control stand so that its operation can be followed by a class while a student engineman or the instructor is at the controls. A model of an A-unit, 1,350-hp., E. M. D. freight locomotive with trucks in which electrically driven motors simulate the traction motors and drive the wheels at accelerated speeds as throttle positions are advanced is one of the training exhibits.

The operator's cab position in the instruction car is arranged as it would be in a locomotive. The control stand used is a standard freight type which has been connected so that it can be used to demonstrate either freight or passenger operation on the control panels of these types of locomotives which are mounted in the car. A speedometer, transition meter, and other cab panel gauges are mounted in their proper location facing the operator's seat. The brake equipment used for demonstration and training purposes is the 8-ET type with a General Railway Signal train-control acknowledger and reset.

* This car was described in the September 1, 1945, *Railway Age*, page 364.

Parts Can Be Studied

Display parts in the car have been arranged, so far as possible, to be operated either from the control stand or by hand-lever or crank mechanisms, where movement of parts is of advantage in explaining their functions. Some parts, such as the cut-away sections of batteries which are mounted on the car wall behind the operator's position, are of real interest to only one class of personnel, in this case the electrical maintenance forces.

On the same side of the car there is a standard freight distribution panel. Next to this there is a freight-engine control panel which has been equipped with an isolation switch to allow its use in demonstrating freight operation and which has another isolation switch added so that passenger-equipment operation can be cut in and explained. Below this control panel there is a double-end fuel pump the left end of which is used for the circulation of fuel through the fuel sight glasses, and the right end for maintaining lubricating oil pressure and for the operation of the pilot valve. Fuel lines are painted red; lubricating-oil lines, yellow.

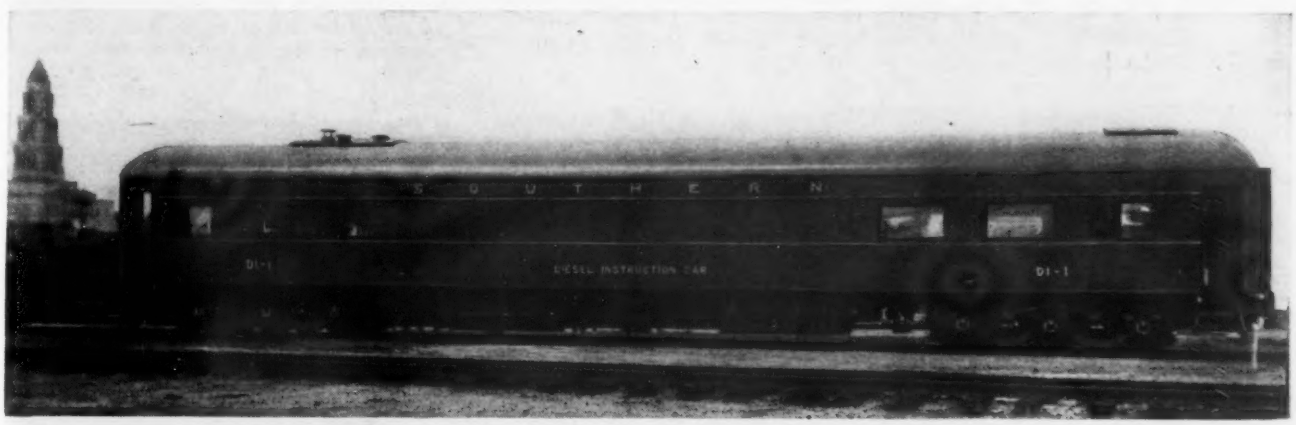
A complete installation of an E. M. D. passenger-locomotive high- and low-voltage cabinets has been made which is operated from the control stand. Next to it is an E. M. D. freight locomotive high-voltage cabinet which is so connected that it uses the low-voltage section of the passenger cabinet when freight operation is being demonstrated through the hook-up to the motors on the model trucks. A standard load regulator, from which the top cover has been removed to show its operation and positions at various stages of engine loading, is set up next to the electrical-equipment cabinets.

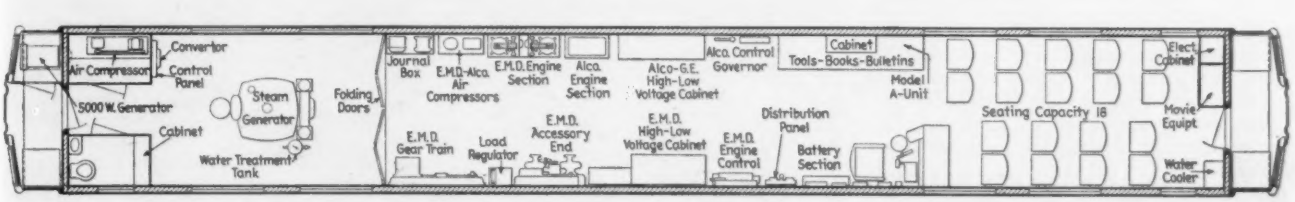
An accessory, or governor, end of an E. M. D. engine has also been installed on this same side of the car. The cover plate has been removed from the overspeed trip and the governor control cover has been hinged so that the valves and linkage can be exposed. A standard Woodward governor is used with windows cut in the housing to show its operation. A variable-speed motor drives the governor to represent the engine speeds in various throttle positions. Cut-aways of the water pumps, the lubricating-oil pump, the oil scavenging pump and the oil lines have also been made on this display. In addition, the lower right section of the housing has been cut out to expose the harmonic balancer, the accessory drive gear and the spring packs. A cylinder head is mounted on the left side of the engine section with its injector and fuel lines. A pop test lever on top of the head is used to show the amount of fuel which is injected into a cylinder in each throttle position. The fuel spray from the injector nozzle can be observed through a sight plate.

A complete gear-train housing, mounted with all of the gears assembled to show the method of timing and the oil lines, enables students to study this part of the locomotive. On the right side, in its proper relative position, there is a cut-away of the engine blower.

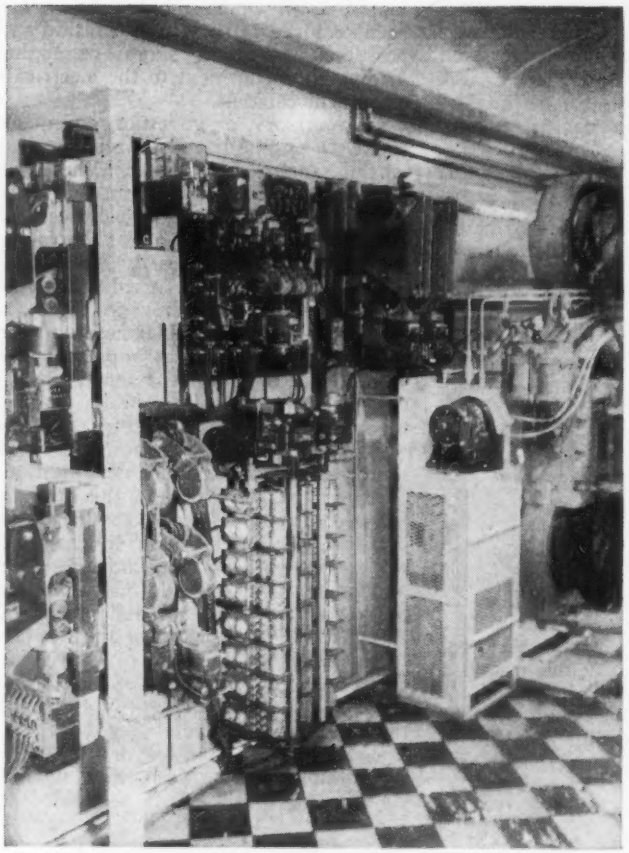
Air-Brake Equipment

The air-brake system, controlled from the operator's position, is mounted at one end of the car against the washroom wall. It includes a complete AB valve

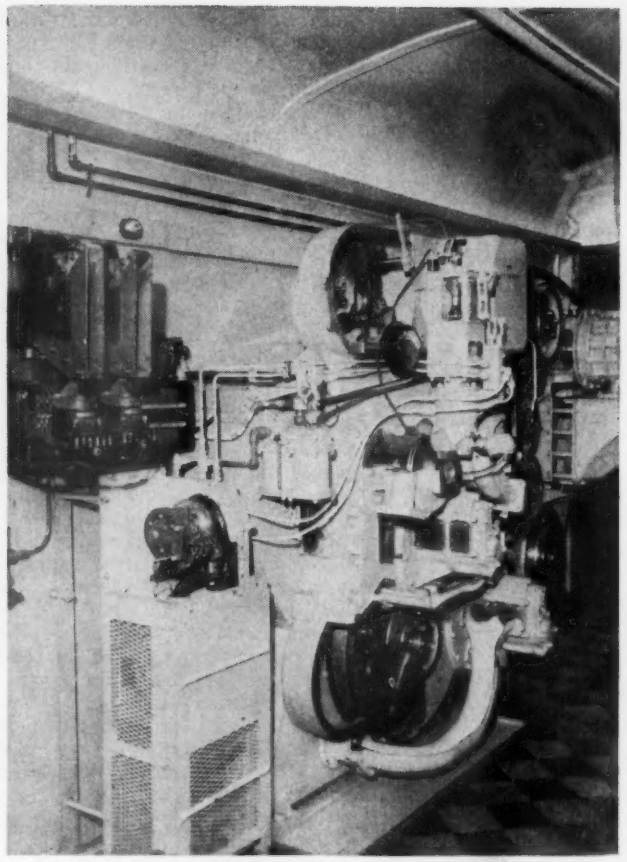




Exterior and Plan Views of the Southern's Instruction Car



High- and Low-Voltage Cabinets from Freight and Passenger Locomotives Have Been Installed



The Governor End of an E. M. D. Engine Which Has Been Sectioned to Show the Operation of Parts

and cylinder connected to a volume reservoir beneath the car which gives an equivalent in braking demand to 18 freight cars. Gauges are connected to the AB valve which show brake-pipe pressure, cylinder pressure, auxiliary-reservoir pressure and emergency-reservoir pressure.

Compressed air to operate the brake system can be obtained either through the use of an independent air compressor carried on the car, or by using shop air, at 60 lb. per sq. in. or above, and boosting it to 120 lb. per sq. in. The motor-driven compressor has a capacity of 25 cu. ft. per min. and supplies air for all needs on the car. Two 20-in. by 66-in. air reservoirs are carried beneath the car body. The booster pump is located under the car and is designed to save the use of the motor-driven compressor and the drain on car batteries. It is made of a 9½-in. locomotive air compressor cut down to a 6-in. cylinder on the air side. The motor-driven equipment is located in the left rear vestibule and closet on the car.

Electric Current Supply

Electric current required on the car is furnished from two sets of 32-volt, 1,000-amp.-hr. batteries. The battery sets are used in series to supply current at 64 volts for the operation of controls, the air compressor and the steam generator. Takeoffs at 32 volts are made on one side for car lighting and on the other side for the current needed by the air-conditioning equipment. Batteries are kept charged by a 5-kw., 80-volt, generator which is run by a direct-connected four-cylinder gasoline engine. The fuel supply tank holding 70 gal. is located under the car. Where shop current is available, the batteries are charged by the use of two Tungar rectifiers from either 110-volt or 220-volt alternating current.

Steam Generator

A Vapor-Clarkson, CFK 4225-2A, steam generator is used for instruction purposes and is fully operative. Cutaways of the fuel manifold, the DD fuel-metering valve, the fuel solenoid valve, a steam-pressure switch and the stack switch have been mounted on the outside of the unit as near to the same operative parts as possible. The generator is equipped with a Manzel boiler water-treatment injection pump.

The fuel tank for the steam generator holds 350 gal. of oil and is located under the car. The water tank holds 700 gal. Exhaust fans are mounted in the ceiling over the generator to relieve temperature in this section of the car, which is not air conditioned. When desired, folding doors are closed to separate the steam-generator end of the car from the classroom and parts-exhibit section, which is air conditioned.

Additional Parts Exhibits

The parts which have been described are all located along the side of the car on which the operating controls are lo-

The Operator's Position with a Control Stand to Operate Parts on Display

cated and in the end of the car. On the opposite side from the parts already described there are additional parts which have been taken from Diesel-electric locomotives manufactured by both the Electro-Motive Division and the American Locomotive Company. On a bench near the folding doors there is a display showing a Westinghouse air-compressor head, cut away to show the valves; a Gardner-Denver air-compressor head, also cut away to show the valves; and a Hyatt roller-bearing journal box sectioned so that it can be thoroughly examined. Above the bench are cut-aways of a Westinghouse magnetic air compressor unloader valve, a Westinghouse air-compressor governor, and a Gardner-Denver air-compressor governor.

Engine in Cross-Section

Next to this bench there is a cross-section taken from an E. M. D. 567 engine with one throw of the crankshaft mounted in bearings. The cylinder on the left side has the liner and piston cut away to expose the piston crown, the thrust washer and seat. The cylinder head has been cut through the center and so has the injector so that parts can be observed in operation. The cylinder test valve is also sectioned to show its construction and operation.

On the right side the cylinder has been quartered through the cylinder wall, the liner and the piston, to show the piston cross-section, the thrust washer, the wrist-pin carrier, the wrist pin, the connecting rod and the bushings. The water seals on the liner and the head are exposed. The cylinder head is cut away to show the valve guides and seats. The valve bridge containing the hydraulic lash adjusters has been sectioned so that the operation of these parts may be observed. This assembly is driven by a ¼-hp. motor at a speed of 6 r.p.m. When it is in operation, oil is circulated through the piston-cooling pipes and the overhead assembly by a small pump which is located at the side of the exhibit and draws oil from the sump in the oil pan. Handles are mounted on the injector layshaft linkage to operate the rack of the injector. A handle on the overspeed-trip shaft can be used to demonstrate the operation of the overspeed trip. All moving parts in this and other assemblies are covered with sheets of clear plastic as a safety precaution.

Alco Parts

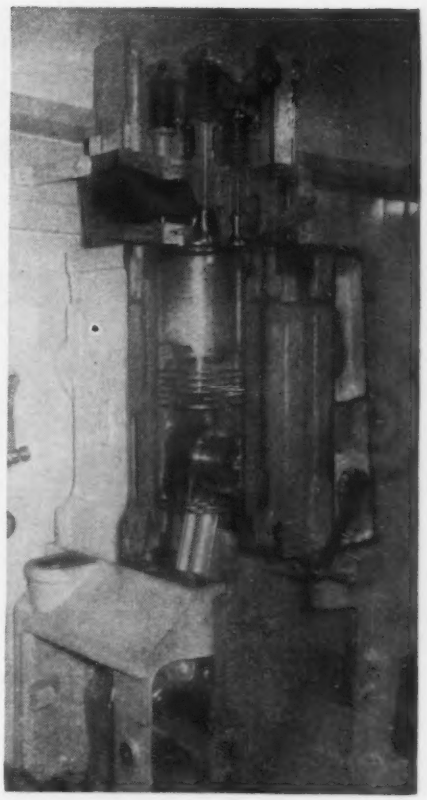
A single cylinder from an Alco engine has been mounted in such a way that, by sectioning, one throw of the crankshaft with its connecting rod can be studied. The liner and piston have been quartered to show the water passages, rings, wrist pin and bushing. The head is partly cut away through the valve guides with one exhaust and one intake valve exposed. The action of the rocker arms, push rods and lifters to one section of the cam shaft and the valve action can be seen by turning of a crank attached to the cam shaft.

Next to the engine section there is a high- and low-voltage cabinet from an Alco passenger locomotive which is operated from the engineman's control stand. Other Alco parts include a throttle operator, a fuel pump and injection nozzle in cross sections, engine switches, and a complete engine-control instrument panel with fuel- and oil-pressure gauges, and alarm lights. There are also two Alco oil-pressure switches with the master E-valve control.

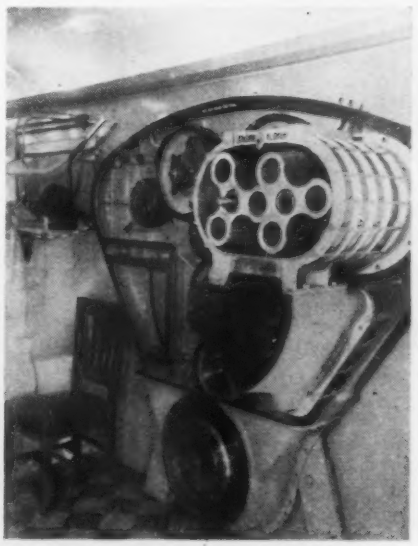
Power-Driven Trucks

The model of an A-unit of an E. M. D. freight locomotive is mounted on a bench on the opposite side of the car from the control stand. Students are able to observe the rotation of the wheels on this model as the controls are operated.

The cab of the unit is mounted on two air cylinders which raise it clear of the trucks. The trucks are equipped with 32-volt motors geared to the wheels and operated from the control stand through the electrical equipment on the

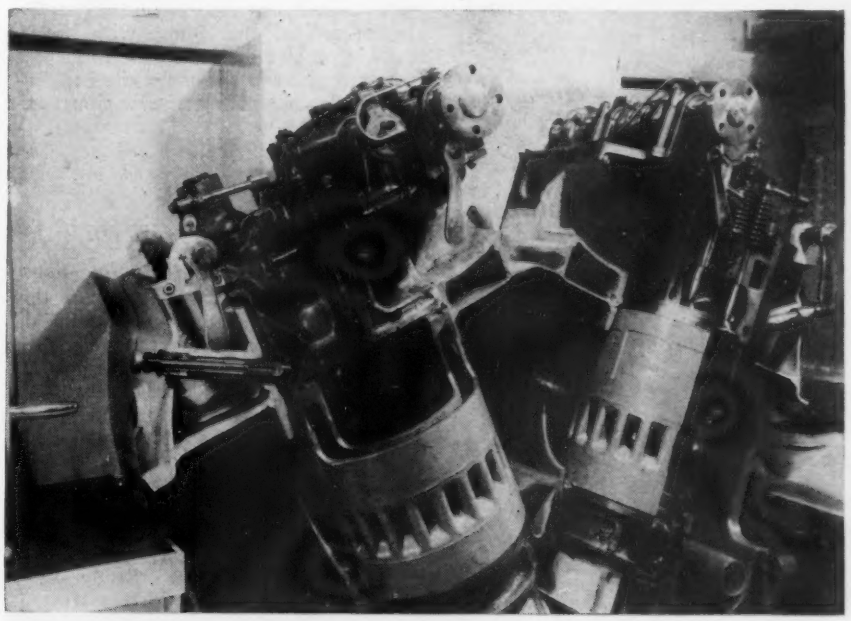


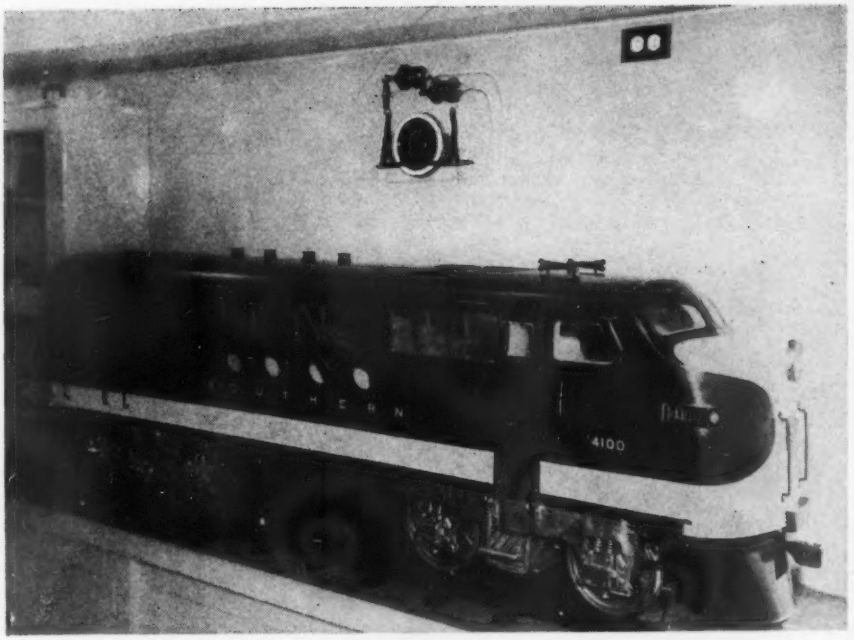
A Crank-Operated Sectioned Alco Cylinder Serves to Demonstrate the Movement of Parts in an Operating Cycle



Timing of an Engine Is Explained with This Complete Gear Assembly in a Housing

A Sectioned Portion of an Actual Engine Is Used to Explain the Functioning of Its Various Parts





Model Trucks and the Brake Cylinder on the Car Wall Function on Demand from Standard Controls

Exhibits Are Arranged for Convenient Study by Normal-Size Classes

car. They run at high speed in parallel and at low speed in series. They can be reversed. Simulated engine failures affect the flow of power to the wheels just as an actual failure would on the road. When controls are set for passenger operation, only one wheel set operates because the demonstration car has only one passenger-type high-voltage cabinet.

A model brake cylinder is mounted on the wall of the cab above the model unit. The brake cylinder is connected so that the operation of the independent brake valve and the train brake can be demonstrated. The train brake set-up is connected into the AB brake valve at the rear of the car and the action shown in the model cylinder is as if it were the cylinder on the last car in an 18-car freight train.

Other Equipment

Thirty-six charts to be used in connection with lectures on various phases of operation or maintenance of Diesel-electric locomotives are carried on the car. Full sets of maintenance, parts and service manuals covering all locomotives are likewise carried for the use of the instructor where charts are inadequate. A Bausch & Lomb Paloptican which can project any regular size slides, and cuts or blueprints up to 8 in. by 8 in. in size, is a part of the equipment. Slides on file include many from the Electro-Motive Division, the American Locomotive Company and the Westinghouse Air Brake Company. Moving pictures can be shown with a Bell & Howell No. 179 Film-O-Sound 16-mm. projector which is complete with a microphone and a turntable. It can be used for the projection of sound-on-film or sound-on-disc films, or with a voice description of the film being shown. This unit can only be used where 110-volt a.c. current is available. A roll-type screen is suspended from the car ceiling in front of the classroom section of the car when slides or films are shown. A public address system which consists of a 25-watt R. C. A. amplifier with two speakers and a lapel microphone with 150 ft. of cable enables the instructor to lecture from any point in the car while explaining or demonstrating the various exhibits.

Classes

The planned seating capacity of the car is 18, although a few more can be accommodated by using folding chairs. Two class sessions are held each day while the car is at any shop or terminal point. Class hours are arranged for the convenience of the men desiring to attend. Average attendance is about 16. The car has been air conditioned to insure comfort for class attendants during hot weather.

Material Buying Tops Billion

High-volume purchases swell August total and set high mark for first eight months

CLASS I railroads spent $135,961,000 during the month of August and $1,055,125,000 during the first eight months of this year for materials, supplies and fuel, excluding equipment, according to estimates prepared by *Railway Age* and based upon special reports received from 82 individual roads. Railway buying during the month of August was greater than for any other month this year with the single exception of March. August purchases exceeded those of July by two per cent and were six per cent greater than for January; although two per cent less than for August last year, they were 13 per cent greater than for the same month in 1943, 35 per cent more than for that month in 1942 and 32 per cent more than those of August, 1941.

Although approximately three per cent less than expenditures for the same period last year, total material purchases for the first eight months of 1945 were 19 per cent greater than the $890,393,000 total at the end of August, 1943, 22 per cent more than for the same period of 1942 and 44 per cent greater than for the first eight months of 1941.

New Peak for Stores Stock

A new peak was established in the monthly purchases of the thousands of items of miscellaneous materials and supplies required for the maintenance of equipment, structures and track, which for the most part comprise storehouse stock, when the August total reached $77,980,000. This was six per cent more than for the months of June and July, one per cent more than for similar purchases for August, 1944, and 24 per cent, 42 per cent and 21 per cent more than during the same months for 1943, 1942 and 1941, respectively.

Total purchases in this classification for the first eight months of 1945 amounted to $584,150,000 or two per cent more than the $573,687,000 total for the same period of 1944; they were 29 per cent greater than the comparable period in 1943, 16 per cent more than 1942 and exceeded the purchases during the first eight months of 1941 by 32 per cent.

Rail deliveries during August dropped 19 per cent below those for July and were 13 per cent less than June deliveries; they were also 20 per cent less than for August, 1944, but represented a gain of 17 per cent over the same month in 1943, 11 per cent more than for August, 1942, and 32 per cent greater than for the eight months of 1941. Total expenditures for rails during the first eight months amounted to $42,938,000 and were 16 per cent less than the $51,213,000 for the same period of 1944; however, they exceeded those of the 1943 period by 19 per cent, were 10 per cent greater than for the first eight months of 1942 and topped 1941 purchases for the same period by 12 per cent.

Expenditures for crossties reflected an encouraging up-turn in production compared with the months of May, June and July. The August total of $6,715,000 apparently marks a turning point in the general trend, for it shows an increase of 14 per cent over July figures, it is seven per cent more than for June and slightly more than for May. However, the $48,217,000 spent for crossties during the first eight months of 1945 indicates that production this year still is running far behind the estimated requirements for 1946. In fact, total expenditures for crossties at the end of August were 16 per cent less than for the same period of 1944 and five per cent less than for the first eight months of 1943, although cumulative expenditures for the comparable period of 1942 amounted to only $45,513,000 and $32,057,000 at the end of August, 1941.

Purchases of materials and supplies from manufacturers (comprising total material and supplies less fuel) during August were greater than for any other month this year; they exceeded those for July by four per cent, those for June by five per cent and were 12 per cent greater than those of last January. Because of the sharp drop in rail deliveries and low crosstie production, total expenditures for manufactured products sagged one per cent below those of August, 1944, but they exceeded those of August, 1943, by 19 per cent, they surpassed those of the same month in 1942 by 38 per cent and were 24 per cent more than for August, 1941. For the same reasons the first eight months' purchases of manufactured products sagged one per cent below those of the same period last year; however, the 1945 total at the end of August amounted to $675,305,000, which topped the 1943 period by 25 per cent, 1942 by 15 per cent and was fully 32 per cent greater than for the comparable interval in 1941.

Fuel Deliveries Off

Fuel deliveries for the month of August sagged three per cent below those for July and were fully six per cent less than for June. August purchases amounted to $46,159,000, which is four per cent less than for the same month last year, but two per cent more than for that month in 1943, 30 per cent and 51 per cent greater, respectively, than for August, 1942 and 1941.

By the end of August this year Class I roads had purchased $379,820,000 of fuel or five per cent less than for the same period last year, but eight per cent more than during that period of 1943, 38 per cent more than during the first eight months of 1942 and 73 per cent more than for the comparable period of 1941.

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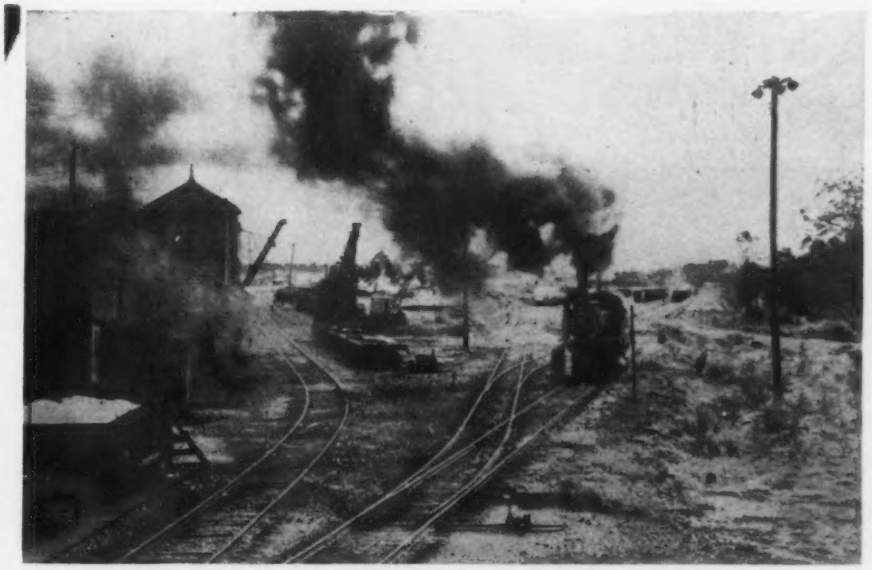


Railway Yard at Oak Ridge, Tenn., Atomic Bomb Town

Since October, 1944, the Roane-Anderson Company, subsidiary of the Turner Construction Company of New York, has operated a railroad within the 59,000-acre government reservation at Oak Ridge. The railroad, consisting of 35 miles of track, five locomotives (three steam and two Diesel), 11 flat cars, three cranes, a bulldozer and 105 railroaders, handles an average of 3,000 cars a month, hauling both industrial freight and supplies needed for the 75,000 who work in the atomic bomb plant. Cars are brought to the Oak Ridge railway yard by the Louisville & Nashville, which is said to have observed that though they take thousands of full cars into the area, they never seem to bring anything out. M. K. Roberts, a former Frisco railroader, is manager of the plant line. Roane-Anderson railroaders are not permitted to discuss their work.

Fluorescent Lighting for Cars

A discussion of the relative merits of systems using vibrating type boosters and inverters

IT IS now possible to obtain lighting systems which will enhance the beauty of railway cars and also give passengers more light without increasing battery load. Fluorescent lamps have made a significant contribution toward better lighting, but difficulties have been encountered in taking advantage of these benefits, most of them arising from the conversion of the electrical current. During the war, however, new devices have been developed which simplify railroad installations. The situation has been further improved by the introduction of new types of fluorescent lamps. They can now be obtained in lengths as great as 96 in. (8 ft.) with instantaneous starting. Another recent development is the circular lamp, opening up new types of applications.

Conversion Systems

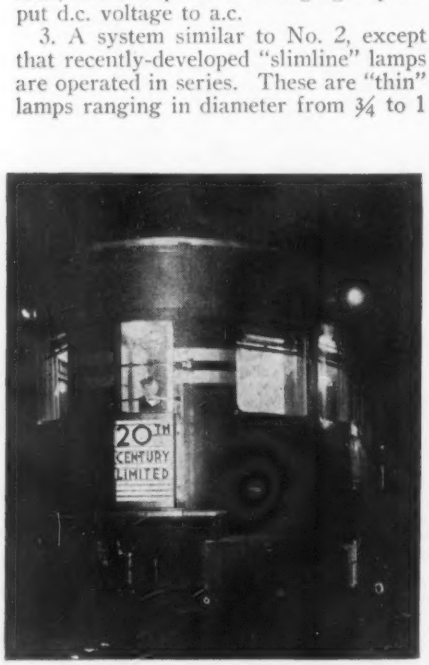
Conversion systems may be divided generally into four types:

1. The voltage doubler, which steps up 32 d.c. to 64 d.c. volts, from which twenty 14-watt fluorescent lamps may be operated and individually controlled.

2. A special system designed to operate the new 93-in. cold-cathode lamps. This is the simplest, electrically, of the four, and is capable of changing any input d.c. voltage to a.c.

3. A system similar to No. 2, except that recently-developed "slimline" lamps are operated in series. These are "thin" lamps ranging in diameter from ¾ to 1 in. and in length from 42 to 96 in. They are operated without starters, and offer the same instant-starting feature as do cold-cathode lamps. Operating them in series simplifies the wiring system, and, through special switches, individual lamp control is possible.

4. An arrangement for changing low d.c. voltage to a.c. for operating 30-watt lamps in parallel.



Exterior View of Passenger Car Reveals Attractive Brilliance of Interior Fluorescent Lighting—Sign Is Also Fluorescent Lighted

Suitable Applications

Each system has its advantages, depending on the economics of the particular application, passenger preferences, and the type of electrical installation.

The voltage doubler, which offers very high efficiency with individual lamp control, shows perhaps the greatest promise for railway coach use. The 15-in. length of the 14-watt lamps, to which it is particularly adapted, is suitable for individual seat lighting. Since 20 lamps may be operated by one converter unit of this type, and there are 40 seats in the average coach, only two converter systems are required for seat lighting. Aisle lighting may be handled with 40 of these lamps arranged in a continuous strip.

The voltage doubler system also has wide application for diners and club cars. It makes possible the construction of small, compact power conversion equipment and allows for the use of multiple power conversion channels, so that in case of power failure of one unit, only a small percentage of the total lighting is lost. In a diner, for example, four voltage doublers, running the light load, would permit the use of eighty 14-watt lamps, which could be arranged artistically in three rows down the center and on either side of the car (20 over each row of seats and 40 down the aisle). This would mean an overall consumption of about 1,500 watts, allowing for all loss factors in the fluorescent system.

Since 14-watt white fluorescent lamps are currently rated at 485 initial lumens per lamp, the overall illumination provided would be 80 x 485, or 38,800 lumens, equal to 25.8 initial lumens per watt. This would produce an illumination of about 24-30 foot-candles without greatly increasing accepted incandescent lighting loads. Incandescent lamps offer far lower lighting levels, since they are based on lamps (25-watt, 60-volt) having an output of 285 initial lumens per lamp or only 11.4 lumens per watt.

Another example of the use of fluorescent lighting, even where low lighting levels are desired, as in Pullman cars, is that of "black" (ultra-violet) light directed at carpeting, safety signs and upholstery and drapery. These are illuminated, for purposes of decoration, safety marking or identification, by dyeing or painting the objects with fluorescent material. Fluorescent materials have the advantages of giving off visible light when irradiated by ultra-violet light.

Black light may be furnished most efficiently by special fluorescent lamps covered by a glass filter to eliminate the visible spectrum and allow only the invisible ultra-violet to penetrate the tube. Such lamps are quite efficient with phosphorescent chemicals and in exciting fluorescent dies and paints. An example of effective black light utilization is provided by the Santa Fe's El Capitan, where carpets were dyed with special fluorescent dies to provide illumination at floor levels.

In planning illumination for compartment-type cars, it should be noted that since these are closed off from the aisle, a high-level continuous strip light arranged in the ceiling above the aisle can be used, and will produce a very practical and decorative effect. Slim-line lamps may readily be adapted for this purpose.

One Definite Need

It might be pointed out, at this juncture, that there is a definite need for a low-wattage, smaller-size fluorescent visible light operating on 64 volts which could be used for individual berth illumination in Pullman cars. Six to ten-watt fluorescent lamps operated by a voltage doubler would be most suitable for this application. The development of such lamps would open the Pullman field to individual fluorescent lighting.

The vibrator-type voltage doubler consists of a vibrator and a group of condensers, the latter being charged in parallel and discharged in series by means of the vibrator. The efficiency of this system under full load is about 95 to 98 per cent, which is higher than any other conversion means known at this time. A typical unit weighs only about 12 lb. and has a capacity of about 300 watts. Most significant of all, it requires less battery current for a given light output, and the vibrators last 2,500 hours, or as long as the lamps. Parts are relatively inexpensive to replace. Wiring is simplified, since the car body may be used for the ground return.

System No. 2, designed to operate the new 93-in. cold-cathode instantaneous-starting tube, can be used on railroads having voltages ranging from 32 to 600. About 800 volts are needed to operate

By
WILLIAM W. GARSTANG
President, Electronic Laboratories

two of these lamps in series (1,600 are needed for operating four lamps in series). About 1,500 volts are needed during the 2-lamp starting cycle. The high voltage needed for these lamps is obtained through the use of a step-up transformer and vibrator in combination.

Advantages of the long, cold-cathode lamp include the elimination of many fixtures and considerable wiring, more even distribution of light, and the absence of annoying flicker when starting. This is especially important on 600-volt electrified railways which cross other tracks and switching points, causing frequent interruptions in circuit. Wiring is simplified, also, because no starting switches or other auxiliaries are necessary. Output is 22 lumens per watt, or twice that of an incandescent lamp in the same circuit.

System No. 3 is particularly well suited to railway lighting since it provides the highest lumen output through the use of 42-in. slimline lamps. Forty lumens per input watt are obtained, or over three times that from standard incandescent bulbs used for the same purpose.

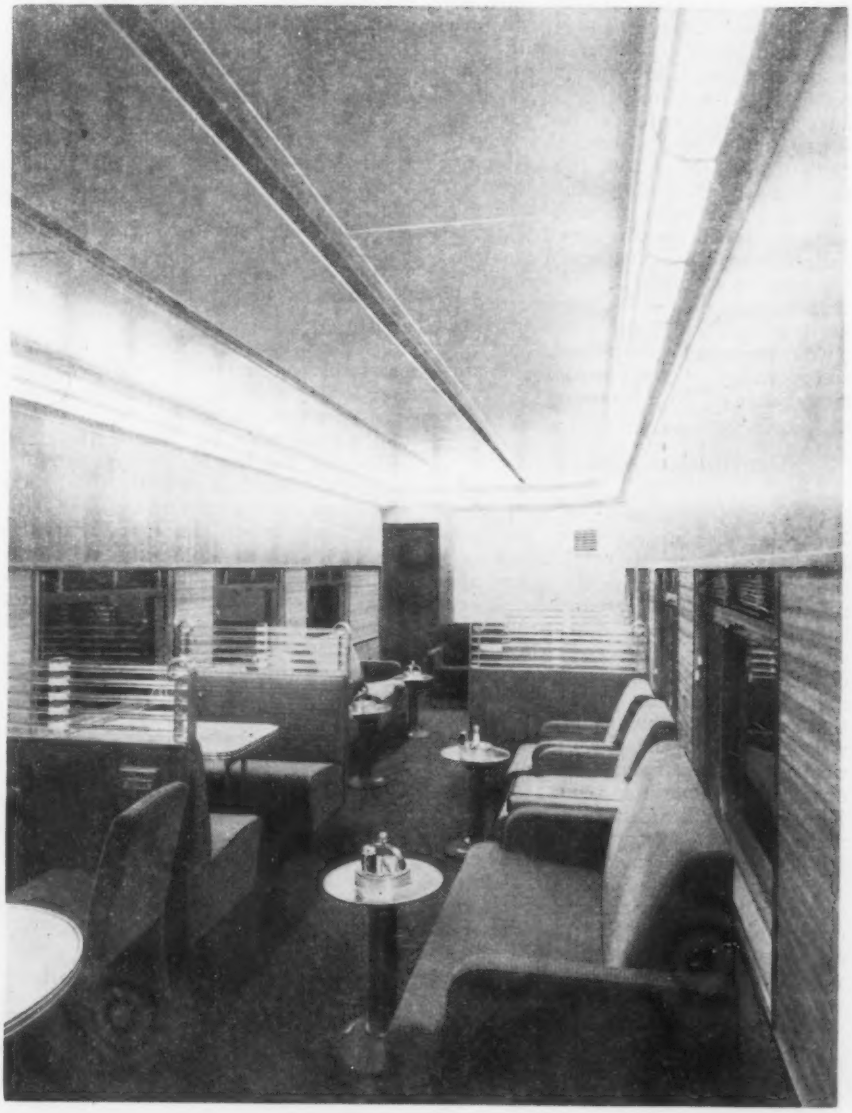
Automatic voltage regulation is provided over an input range of 28 to 40 volts, insuring constant light output. Other similar conversion equipment is available for 64- and 110-volt cars.

Ten to 14 lamps (42-in. slimlines) may be operated per power unit, three to four power converters being required per car. Individual reactors and starting switches are entirely eliminated.

System No. 4, which operates sixteen 30-watt lamps in parallel, allows individual control of lamps, offers 27 lumens per watt, but, because of the added wiring needed and the individual reactors required for each lamp, is a more costly system.

Greater Eye Appeal

Because good lighting is so important in transportation, the use of fluorescence is certain to increase in the future. Installations such as those illustrated herewith demonstrate the high levels of illumination obtainable through its use, not to mention the greater eye-appeal and the artistic interior design possibilities offered by straightline and circular lamp construction.



Top—An Example of Fluorescent Coach Lighting on the New York Central—Bottom—A Type of Lighting Which May Be Accomplished with Either Long or Short Tubes

Fire Hazards in Diesel shops

Separate inspection, maintenance and repair facilities should be provided and protection should be afforded structures and equipment to preclude possibility of heavy losses

By W. S. WICKER
Chief Engineer, Transportation Mutual Insurance Company

DURING the last year several articles have appeared in the *Railway Age*,* in which certain essential requirements for shops and other facilities for inspecting, servicing, maintaining and repairing Diesel-electric locomotives have been discussed from various viewpoints, including location, the type of construction, the layout, the inspection facilities, the shop equipment needed for various classes of work, and other subjects pertinent to the operation and maintenance of locomotives of this type. In these discussions many important details bearing on the facilities needed to perform the various operations on Diesel power have been considered, but little consideration was given to the important matter of fire prevention.

Ventilation a Necessity

Obviously, ventilation is of greater importance in connection with the maintenance and repair of Diesel locomotives than with steam locomotives, and this relative importance increases in connection with testing and adjustments, with engines running, after repairs have been completed. While some mention was made in the articles cited of the fact that ventilation is important, all of them were concerned primarily and more particularly with the facilities required adequately to maintain locomotives of the Diesel type, and did not, therefore, emphasize this point or go into the need for fire prevention and protection.

On the other hand, the Fire Protection and Insurance Section of the Association of American Railroads has undertaken a study of the fire hazard involved in the operation of Diesel locomotives on the road. While this study has not been completed and, therefore, no conclusions have been reached, the Section's news letter No. 98, for March, 1945, carries the information that the number of serious fires that have damaged Diesel locomotives has demanded consideration of fire protection on a scale commensurate with the hazards to be controlled. Some of the conditions that surround the inception of these fires and that made some of them difficult to extinguish were mentioned in this letter. Since a few of these cases bear on the problem of fires in Diesel shops, those that do will be mentioned later in this article.

In the beginning there was little appreciation of the role that Diesel-powered locomotives were to play in railway transportation or of the rapidity with which they were to assume this role. Primarily, the first locomotives acquired were considered as individual units for special service and not as a class or type of motive power. As a result of this viewpoint, it was the original procedure to utilize for the maintenance and repair of these units facilities provided for maintaining and repairing steam locomotives, despite the fact that it was evident from the start that these facilities were not suitable for the new locomotives. As more units were acquired, it became evident that separate shops would be necessary and, in some cases, quarters for working on Diesel locomotives were provided adjacent to the existing steam-locomotive shop, with or without partition walls to separate the two shop areas. Other roads elected to provide separate buildings for the inspection and maintenance of their Diesel locomotives.

Shops Must Be Separated

Experience has shown that where the shop spaces provided for the two types of locomotives are adjacent, it is essential that a partition wall be constructed between them to exclude from the Diesel shop the dust, soot and moisture which are found normally in enginehouses and steam-locomotive shops. Further experience has also shown that, as a matter of safety, this wall should be constructed as a fire wall which will cut off completely the Diesel-locomotive maintenance and repair operations from the steam-locomotive shop. Such a wall will prevent possible fire loss as a result of gases or fumes incident to spraying cleaning solvents, including gasoline, inside the Diesel locomotives, permeating the steam-locomotive section and coming into contact with open flames in this section.

In addition to the spraying of flammable cleaning solvents inside Diesel locomotives, which may be done either in buildings or on servicing tracks, fuel oil, although not as highly flammable as some of the lighter oils, solvents, varnishes, etc., is itself flammable and, under favorable conditions, gives off fumes and vapors that become flammable when sufficiently concentrated. Other flammable liquids and their vapors against which protection should be provided include amyl acetate, which is used for cleaning paint and lacquer, and the solvents that are employed for the paint and lacquer that are sprayed on the various surfaces of the locomotive.

Fire-Resistive Room

In shops where major repairs are made to the electrical equipment of Diesel locomotives, dipping tanks and bake ovens become a necessity. This equipment also presents a serious fire hazard, and should be housed in a fire-resistive room, preferably in a separate building. However, if this is not feasible, the next best arrangement is to cut it off from the main shop by means of a standard fire wall, or walls. In the latter event, the room provided should have an outside entrance, with no opening between it and the main shop. If, for any reason, an independent outside entrance cannot be provided, and one or more openings must be cut between the main shop and the oven room, they should be protected by means of fire doors with thermostatic release, approved by the Underwriters.

Likewise, store rooms and oil-handling facilities should be separated from the main repair shop by standard fire walls, with openings protected by fire doors having fusible links or thermo-

*What Kind of Repair Facilities for Diesel Locomotives?, October 21, 1944; What Features in Diesel Shops?, Part I, November 4, 1944; Part II, November 11, 1944; and What Type of Diesel Repair Shop Facilities?, April 7, 1945.

static releases approved by the Underwriters. Rooms for cleaning parts should also be separated in the same way from other facilities.

Because of the greater hazard of the flammable vapors given off from oil when heated to a sufficient temperature to reclaim it, oil-reclamation facilities should never be placed in a room adjacent to or connected with the main shop, but in a separate building removed far enough from the main shop and other buildings so that it does not constitute a hazardous exposure or, in any event, it should be separated from the main building by an unpierced fire wall. For the same reason, oil-reclamation facilities should never be placed in the basement rooms of any building. Since air and oil filters are cleaned in heated oil, there is the same fire hazard in this operation as in oil reclamation, so that the same precautions should be observed and the same forms of protection provided.

Probably the most elementary rule in protecting facilities using or storing oil or other flammable liquids is to prohibit the use of open flames in rooms containing these facilities, or adjacent to such facilities in the open. There should be, therefore, strictly enforced rules against smoking and the use of torches in oil rooms, oil-reclamation rooms, filter-cleaning rooms, dipping-tank rooms, where flammable liquids are used for cleaning parts or spraying paints, and in other rooms of similar occupancy.

Both smoking and the use of open torches should be prohibited at all times in repair shops, and also in the engine compartments of Diesel locomotives whether they are in the shop or outside. Accumulations of oil and other combustible matter make these compartments a serious fire hazard unless they are protected strictly against the possibility of ignition of any of these flammable substances.

Electric welding, and sometimes acetylene welding, is necessary and must be done in the shop in most cases. But it should be done only under the strictest supervision. If the supervision is careful and persistent, the incidence of fires from the electric arc or welding flame will be low, and through the use of adequate fire-protection facilities the severity of such fires as do start will be kept to the minimum.

How Fires Get Started

Diesel locomotives in operation on the road and as they come into terminals and shops present more of a fire hazard than is generally realized. Oil, oil-soaked dust and trash and paper that are picked up while running accumulate on fuel tanks, battery cabinets, trucks and traction motors, as well as on air reservoirs under the locomotives. All of these accumulations have caused fires and have spread fires, some of which have resulted in heavy losses. Fires from these causes have occurred almost entirely on the road and many have been started by sparks from brake shoes. It is reported that some of these fires have resulted in damage amounting to as much as $60,000 to a single locomotive. Similar fires can be started inside buildings by a torch or sparks from welding. It becomes obvious, therefore, that it is essential to clean away such accumulations to reduce the fire hazard and the incidence of such fires.

It is equally important from a fire-prevention standpoint that the interiors of Diesel locomotives be kept scrupulously clean. It is surprising how often loose paper, paper cups, trash, oil-soaked rags, oily waste and other combustible substances have been found in engine compartments, under cabs, behind tanks and cabinets, and in the fronts of locomotives. Regular inspection and the removal of these combustible materials from under the locomotives and in the engine compartments should be mandatory.

Such measures as are necessary should also be taken to prevent these accumulations in engine compartments. An additional fire hazard in Diesel locomotives lies in the fact that leaks occur in pipe lines, particularly at connections. Obviously, they should be repaired at once, and the waste oil removed. When the locomotive reaches a terminal a more thorough job of cleaning is called for, to remove, so far as possible, all traces of the residual oil.

Faulty wiring and electrical fixtures are always a fire hazard in any structure; they become a real menace in any situation where there are as many opportunities to start fires as there are in Diesel shops and their incidental facilities—even in those where every effort is made to maintain cleanliness and ventilation. For this reason, it is highly important that all electrical work conform to the National Electric Code requirements for this type of occupancy. For similar reasons, all electric lights in store rooms, oil-handling rooms, cleaning rooms and where spray painting is done, should be equipped with vapor-proof (explosion-proof or vapor-tight) fixtures, and all lights on extension cords should have vapor-proof globes and approved metal guards.

Must Have Ready Access

In the design of servicing and repair facilities for Diesel locomotives, particular attention should be given to provisions for ready access to both the repair shop and the servicing building, and to the availability of switch engines for evacuating the Diesel equipment in case of fire. The use of roundhouses for the servicing and repairing of this equipment introduces a bottleneck at the turntable, which may prevent ready evacuation. To overcome this situation, Diesel-locomotive servicing and repair facilities should be divorced completely from roundhouses in which steam locomotives are also handled.

Although fire prevention is of the highest importance and will save much damage to and destruction of property, the job is only half done if it goes no further. Experience has shown that despite the most carefully thought-out plans and well-conceived and strict supervision, fires do occur and fire protection is equally important with fire prevention. Therefore, to complete the job of providing maximum immunity to such damage, tried methods of fire protection should be installed, both in the shop and on the locomotive itself. In the case of Diesel shops the protection equipment is relatively simple and not unduly expensive. The same basic methods are indicated for the locomotives, but on a considerably smaller scale.

For Diesel Protection

For the Diesel shops, built-in fire-protection appliances are considered to be the most desirable, although appropriate portable equipment should also be provided. An adequate number of containers of foam-making solution or foam-making powder, with suitable applicators, or similar equipment for a fog system, should be furnished for each Diesel shop. These systems should have connections for 1½-in. hose at intervals of 75 ft. along each of the side walls, with a 50-ft. length of 1½-in. C.R.L. hose, fitted with an appropriate nozzle, supported on a rack at each connection.

This fixed fire-protection equipment should be supplemented by at least one portable carbon-dioxide extinguisher of 20-lb. capacity for each 1,250 sq. ft. of floor space. In turn, these smaller extinguishers should be supplemented by a number of 50-lb. extinguishers of the same type. Special attention should be given to insure sufficient fixed equipment to give full protection to the dipping vats and other special hazards. The size of this installation will depend on the magnitude of the operation carried on in the baking room.

For the locomotives themselves, it is desirable to install built-in systems of either high or low-pressure carbon-dioxide type protection. However, built-in foam or fog-making protection is equally desirable. As in the shop, the fixed system on each locomotive should be supplemented with two of the 20-lb. portable extinguishers of the carbon-dioxide type, with a small carbon-tetrachloride extinguisher in the cab.

In any consideration of fire prevention and fire protection in facilities for the inspection, servicing, maintenance and repair of Diesel locomotives, or in the locomotives themselves, it must be kept in mind that although Diesel fuel oil and lubricants have low volatility, they will burn, and that most of the solvents and cleaning fluids used in the shops are not only highly flammable, but that they volatilize into highly flammable and explosive gases. It should also be recognized that practically all of these substances, including lacquers, varnishes and paints, once ignited, burn fiercely and persistently. It is for these reasons that the provision for ventilation should be adequate to keep the gases below the explosion-concentration point. It is also for these reasons that both fire prevention and fire-protection facilities must be adapted specifically for the conditions that have been described.

The Railroads' Environment Has Changed

Their problem is wholly different now from that after World War I—Then the goal was to keep capacity abreast of traffic, now job is to fend off inroads of socialism

By SAMUEL O. DUNN

Editor, Railway Age, *and Chairman, Simmons-Boardman Publishing Corp.*

OUR railroad problem has changed greatly within the last dozen years. It has so changed because its *environment* has greatly changed. We cannot intelligently consider it any more without giving paramount consideration to this change in its environment, and to the greater change in its environment that may occur.

Nobody doubted after World War I that government policies would be much the same as before—that private enterprise would be relied upon for employment and the production and distribution of goods, or that production, commerce, traffic and employment would increase as they always had. The railways were under government operation, but were expected to be returned soon to private operation and the principal apprehension regarding them was not that they would not have enough traffic, but that they would have too much, resulting, as for some years previously, in "shortages" of freight cars.

Prosperity After War I

These expectations were in the main fulfilled. War-time government controls were quickly abandoned. The expenditures of the federal government were reduced from $19 billion in the fiscal year 1919 to $3 billion in 1922. Production, commerce and traffic became larger in 1920 than ever. The inflationary advances of prices and wages in that year were swiftly reversed by a "buyers' strike" and competition. The resulting depression in 1921-1922 speedily passed; and in the seven years ending with 1929, production, commerce, traffic and employment rose to new high levels. The railways, under renewed private operation, participated in the prosperity, and spent billions of dollars for expansion and improvements—with the result, among others, that from the middle of 1923 until in 1943, when war freight traffic had become double the previous peace-time traffic, they furnished promptly all the cars for which shippers asked.

Contrast that post-war period with the present one. We can no longer assume that our railroad problem will have an environment of private enterprise. Our nation is drifting toward national socialism because of the widespread acceptance since 1932 of certain economic theories which already have been incorporated in important legislation and which the believers in these theories are trying to incorporate in much legislation still more important. If these theories continue to be the driving force of important legislation, our railroads will be directly affected by this legislation; and they will be indirectly affected by it even more, because of the trend toward socialization of all industries that it will stimulate.

The total traffic available for all carriers is determined by the total volume of goods produced and distributed by other industries, and by the total amount of traveling the people do. And the total volume of goods produced and distributed in future, the total amount of traveling done, and the way in which the total traffic thus created will be divided between the railways and other carriers, will be largely determined by how much of the socialistic legislation now being proposed is passed. The problem the railways presented after World War I was that of (1) returning them safely to private operation and (2) putting them in financial and physical condition to handle an unprecedented peace-time traffic. These things proved much less difficult to do than many feared they would be.

Railroads Retarding Inflation

The railways under private operation during the recent war rendered magnificent service to the nation. This service consisted principally of handling increases of about 100 per cent in freight traffic and 300 per cent in passenger traffic. But it included other important things usually overlooked. The railways have contributed more than any other industry toward preventing inflation. In 1918 and 1919, when they were under government operation, the average increase in wholesale prices was only 18 per cent, whereas advances in freight and passenger rates made by the Railroad Administration increased railway revenues per ton-mile 36 per cent and revenue per passenger-mile 21½ per cent. On the other hand, in the four years ending with July, 1945, wholesale prices increased an average of 20 per cent, while almost no advances were made in freight and passenger rates. And in spite of the advances in rates made by the Railroad Administration, it lost $1,600 million in 1918 and 1919, whereas, under private operation, with almost no advances in rates, the railways in the 3⅔ years of the war ending on August 31, 1945, paid the federal government $4,141 million in taxes.

After having rendered this magnificent war-time service, the present problem of the railways is that of passing through the period of transition from war to peace and making enough net earnings under peace-time conditions to enable them adequately to rehabilitate and improve their properties, which have suffered severely because of unprecedented war-time use and of inadequate expenditures on them owing to government war-time restrictions of materials and man-power. Because of the changes in their environment, it is far from certain that they will not find the problem with which they are confronted following World War II more difficult of solution than the problem with which they were confronted after World War I.

Capitalism Needs No Crutch

The economic theories to which I have been referring and the application of which threaten the railroads and all American industry, are a superstructure erected upon the fundamental assumption that private enterprise has become a failure. Only avowed communists and socialists assert that private enterprise has become such a complete failure that it should be absolished. The other promoters of legislation to give effect to these economic theories advocate it upon the ground that government must supplement, "encourage" and give greater opportunity to private enterprise. But almost every proposal and argument they make betrays either ignorance of what is required to enable private enterprise to function successfully, or a purpose to prevent it from thus functioning.

They claim private enterprise has become largely or completely a failure because it has become unable to provide "full employment" and to afford the masses enough purchasing power. Hence private enterprise should be deprived of freedom. This should be done by having government use its power, or at least its great influence, to prescribe hours of work, wages, prices of goods, rates for transportation, rentals of housing, even what may be paid for houses. It is assumed, in the transi-

This article is adapted from an address presented on November 13 to the New England Railroad Club.

tion from war to peace, reduction of hours of work is essential to dividing the work enough to provide enough jobs, and that large increases in wages per hour are essential to providing labor with enough purchasing power. The government's Office of Price Administration takes the position that the resulting increases in labor costs should not be allowed to cause increases of prices; hence, it is trying to restrict prices, including the rental of housing —usually to their level of 1942.

Sometimes the advocates of price control say it should be continued to prevent inflation, and therefore continued only until the production of civilian goods equals demand. But how long will that be? The most acute shortage in this country is shortage of housing. It takes a long time to build hundreds of thousands, and even millions, of homes. How many homes should be built before control of rentals should be relinquished?

Quack Pills for Economic Ills

Private enterprise will not be "free" as long as it is subjected to such government dictation. And the longer government controls are kept in effect the stronger tendency they have to become permanent. Always there are pressure groups that believe they benefit by one or more controls and demand their continuance. We will never have *free* private enterprise again until we get rid of all the controls adopted to deal with the war emergency and some that were adopted ostensibly to meet "emergencies" during the depression. And we will never get rid of them if those who believe in free private enterprise delay making a real fight to get rid of them as rapidly as possible.

Most of the advocates of such legislation as the Murray "full employment" bill profess to agree that we must rely principally on private enterprise for employment and production. But they are sure it cannot be depended on to provide what they call "full employment." They cite the great unemployment we had during the recent depression, which they attribute to failure of private enterprise to provide the masses with enough consumer purchasing power; and they propose various means of maintaining employment and consumer purchasing power at high levels. The Murray bill would require the President of the United States to estimate each year the prospective expenditures of private enterprise and of the federal, state and local governments. If these estimated expenditures would not in the President's opinion cause "full employment," the bill would make it his duty to prepare a so-called "budget" including enough federal government expenditures on "public works" to assure "full employment."

Other bills pending provide for increase in unemployment compensation; financial aid to small business; construction of additional "valley authorities" to increase government-produced power; large expenditures on highways, waterways and airports; broadened coverage under the social security act; medical care for low income groups; "safeguarding" of farm income; and federal aid to both urban and rural local authorities in clearing slums and in providing housing for families with low incomes at rentals at least 20 per cent less than they would have to pay for living in privately owned housing.

No Limit to Tax Burdens

Every measure mentioned would subsidize some group at the expense of the taxpayers. Senator Taft has estimated that the adoption of all of such legislation that is pending would necessitate expenditures by the federal government exceeding $50 billion a year. The largest revenues of the federal government in any war year were about $46 billion. Tax legislation recently passed will reduce these revenues about $6 billion, in addition to the decline in them that will be caused by decline in the national income from its war-time level. For the federal government to do anywhere near the amount of spending proposed would cause it to incur huge annual deficits which would be added to its already enormous indebtedness.

Now what, if anything, is wrong with the economic theories upon which the need claimed for such legislation is based? The most important thing wrong with them is that they ignore the country's economic history before 1930 and assume a failure of private enterprise which has never occurred. Estimates of the country's available labor force, made according to census methods, and of the volume of total employment throughout the 43 years 1900-1942, inclusive, are given in the "Economic Almanac for 1943-1944" compiled and published by the National Industrial Conference Board. These statistics indicate that in the 30 years ending with 1929 employment in this country averaged 97.44 per cent of the available labor force. They also show that during this long period there was no perceptible tendency toward an increase of unemployment.

The percentage of the labor force employed in the decade ending with 1899 was 96.7; in the decade ending with 1919 (which included the period of World War I) 99.2; and in the decade ending with 1929 (which included the brief depression following World War I), 96.4.

Experience's Lessons Ignored

Sir William Beveridge is the economic oracle of those in both Great Britain and the United States who promote revolutionary legislation ostensibly to assure full employment. In his recent book entitled "Full Employment in a Free Society," Beveridge estimates that in Great Britain employment of 97 per cent of the available labor force would be the equivalent of full employment. Yet he, our own Processor Hansen of Harvard and others who contend that private enterprise cannot be relied upon to provide "full employment" in future ignore the fact that in the entire 30 years ending with 1929 we actually did in this country on the average provide employment for 97.44 per cent of the available labor force. Why do they ignore this vitally important fact? I cannot surmise, unless it is because it refutes the fundamental assumption upon which all their proposed legislation is based—viz., that private enterprise has become a failure because it has long failed to provide adequate employment.

Always before the great depression we relied on private enterprise to provide adequate employment, and, in doing so, to provide adequate purchasing power. And it did so. Otherwise the national income could not have increased from $212 per capita in 1900 to $654 per capita in 1929, or almost three-fold. Some of this increase in national income was due to advances in prices, but most of it to increases in the production of goods and services by private enterprise.

What, then, is the evidence offered in support of the thesis that private enterprise has become a failure? Principally, experience during the great depression. Unemployment increased from an average of 1,620,000 persons in the decade ending with 1929 to almost 12 million in 1932 and 1933, and averaged 8,468,000 in the decade ending with 1939 before we began spending for war. National income declined from $80 billion in 1929 to $47 billion in 1932, and in 1939 was still less than $69 billion.

What Caused the Depression?

I am not going to try here to assess the blame for the world-wide depression. It was an indictment of previous policies of our private enterprise and of our own and other governments. But I am going to recall developments that occurred during the depression some of which are now forgotten or ignored by almost everybody but which demonstrates that it was not due to the alleged failure of private enterprise that the depression was so protracted in this country.

Throughout the two decades between World War I and II freight car loadings were the best single measure available of the total volume of production and commerce in the United States. On September 17, 1932, the *Railway Age* published an editorial stating that the bottom of the depression had been passed and that recovery had begun. At that time no government policies of control, or of spending, or of any other kind had been adopted to promote recovery. The statement made that recovery had begun was based upon the change that plainly had occurred in the trend of caroloadings; and that statement was fully supported by incontrovertible subsequent developments. Between July-August and December, 1932, carloadings increased 16 per cent more than seasonally and railway net operating income made an increase, never before or since equaled in any equal period, from $11 million in July to $63 million in October. It is known now to all stu-

dents of world economic history that recovery began in the late summer of 1932 not only in this country but in every other industrial country in the world.

Recovery in this country was interrupted in the first quarter of 1933 by the banking crisis; but after the banks were closed and re-opened in March, 1933, recovery was immediately renewed. Carloadings in May, June and July, 1933, were 17 per cent larger, and in July alone were 27 per cent larger, than in 1932. Railway net operating income increased from only $35 million in the three months May, June and July, 1932, to $166 million in May, June and July, 1933, or 377 per cent. The evidence is conclusive that, although interrupted by the banking crisis, recovery had been under way here for eleven months.

U. S. and France Choked Revival

Statistics of the International Labor Office at Geneva demonstrate that the recovery which began in the latter part of 1932 continued in leading industrial countries until in 1937 it was complete, excepting in the United States and France. What happened in the United States and France? Well, in this country we had the New Deal and in France they had the similar policies of the socialist popular front.

The principal policies of the New Deal were incorporated in 1933 in the National Recovery Act. They included government controls to reduce working hours and advance wages. They included also the expenditure of billions of dollars by government to "prime the pump" of business and increase employment. And they stopped dead in its tracks for two years the recovery that private enterprise had caused to begin eleven months before, and prevented full recovery until we began spending for war. The expenditures of the federal government were increased from $4,600 million in 1932 to almost $12 billion in 1939. Its debt was increased from $19,500 million in 1932 to $46 billion in 1939. And yet, in this period of seven years before we began spending for war unemployment averaged about 9,000,000 persons, or 17 per cent of our available labor force; and the national income was still $11 billion less in 1939 than in 1929, although the population of the country had increased by about 10 million. We had had long and severe depressions before, but never one which approached this one in length and severity.

Why did the policies of the New Deal prevent recovery from continuing here as it did in most other countries? It was because they gave effect to the same economic theories to which the Murray "full employment" and other bills now being pressed for passage by Congress would give effect on a much grander scale. The National Recovery Act assumed that recovery could be caused by efforts to increase merely the purchasing power of the masses. And it assumed that their purchasing power could be increased by (1) advancing the wages of those who were employed, and (2) reducing hours of work and increasing government spending to increase the number employed.

Where Does Prosperity Begin?

And the same things were wrong with these theories then that are wrong with them now, when they are being used as arguments for reducing hours of work, raising hourly wages to maintain wage-earners' war-time "take-home" pay, preventing increases of prices and doing a huge amount of government spending to forestall depression and unemployment.

Nobody questions that it is essential to prosperity that the masses shall have large purchasing power and shall make large purchases. But, first, large purchases by the masses are not all that is needed to cause prosperity, and, second, the means proposed would not increase or maintain the purchasing power of the masses, but would reduce it. Why? Because the policies which were incorporated in N. R. A. and which it is now proposed to adopt on a much larger scale ignore, among others the following vitally important economic facts:

(1) The production of *useful* goods and services is the only source of real national income, and therefore, of real national purchasing power. The measure of the usefulness of any kind of goods or service is the willingness of people to buy it at a price or rate at least equal to the total costs of producing it, including a return on investment. Private enterprise will provide employment in producing all the goods and services that there is reason to believe can be sold at a profit. Hence, *government is certain to make a loss in producing anything which private enterprise will not produce.* Anything produced at a loss causes waste of capital. Capital provides all employment. Hence, waste of capital by producing anything at a loss reduces the employment that otherwise would be available.

(2) The useful goods produced which constitute real national income include both consumption goods and durable goods.

(3) Many wage-earners and other individuals buy many kinds of durable goods. Everybody buys consumption goods, such as automobiles and the materials used in erecting and maintaining housing.

But (4) business also buys these kinds of durable goods. For example, most of the nation's housing is built by business either to be sold or to be retained and rented, and, therefore, business buys most of the materials used in building and maintaining housing.

(5) Many very important kinds of durable goods—i. e., those used in constructing and maintaining the plant of production, transportation and communication—are bought only by business for business purposes.

(6) The volume of buying of durable goods done by business is determined by the current and prospective profits of business. When current and prospective profits are large, buying of durable goods by business increases. When current and prospective profits are small, buying of durable goods by business declines. Therefore, whatever restricts profits, whether high labor costs, high taxes, or too low ceilings on transportation rates, prices or building rentals, will restrict business buying of durable goods.

(7) The production of durable goods for the maintenance, improvement, and expansion of the plant of industry and transportation provides in periods of prosperity a very large part of all the employment and wages which enable the people to buy both consumption goods and consumers' durable goods. Current and prospective profits must be *satisfactory to business* to cause adequate buying of durable goods by business. Because of fluctuations in profits, buying of durable goods by business fluctuates more than any other kind of buying. Hence, *the most effective means that could be adopted to maintain high employment and large mass purchasing power would be means tending to maintain business profits and business buying of durable goods at high levels.*

The Railroads' Experience

These vitally important economic facts can be illustrated by experience in any important industry. They cannot be better illustrated than by experience in the railroad industry.

The railways are large employers of labor. They employ it in the operation of their trains, in the maintenance of their properties, and also in making investment in the improvement and expansion of their properties. Normally more than half of their employees are engaged in the work of maintenance, improvement and expansion.

The railways are also large purchasers of durable goods, including locomotives and cars and materials used in maintaining, improving and expanding their properties. Their purchases of equipment and materials afford employment in the industries from which these durable goods are bought.

How to Maximize R. R. Jobs

What, then, is the influence which principally determines how much employment the railways directly and indirectly provide, and how much consumer purchasing power they provide for those that they directly and indirectly cause to be employed?

There can be no argument about the correct answer to this question. The fluctuations that occur in the amount of employment the railways directly and indirectly provide are due to fluctuations in their net operating income. In the eight years ending with 1930 the railways earned an average of $1,100 million net operating income annually; and in these years they paid an annual average of $2,833 million in wages and spent an annual average of $1,576 million for durable goods.

In the ten years ending with 1940 the average annual net operating income of

the railways declined 53 per cent, or to $520 million; their average annual wage payments declined 38 per cent, or to $1,758 million, and their average annual purchases of durable goods declined 61 per cent, or to $618 million. The decline of $958 million a year, or 61 per cent, in the railways' annual purchases of durable goods was almost as large, and relatively much larger, as the decline of $1,095 million a year in the wages that they paid to their own employees. Therefore, it indirectly caused almost as large a decline in the consumer purchasing power of the nation as was caused by the decline in the wages they paid to their own employees.

In the four years ending with 1944, the average annual net operating income of the railways increased to $1,237 million. And in these years not only did their average annual wage payments increase to $3,160 million, but—in spite of drastic government restrictions—their average annual purchases of durable goods increased to $1,250 million.

Poor Profits Make Fewer Jobs

Almost without exception increases and decreases, year after year, in railway employment, total wages paid and purchases of durable goods—i. e., equipment and materials—have *followed* increases and decreases in profits—i. e., net operating income; and almost invariably year by year the increases and decreases in railway purchases have been relatively larger than the increases and decreases in railway profits, employment and payroll.

The reason why increases and decreases in profits cause relatively wide fluctuations in business purchases of durable goods should be plain to every student of economic phenomena. Durable goods are bought by railways and other business for use in (1) maintaining and (2) improving and expanding their plants. Maintenance is the easiest operating expense to reduce when profits decline; but maintenance expenses always increase as soon as increased earnings permit. And actual or prospective decline of profits speedily causes reduction of the purchase of durable goods for improvements and expansion because all durable goods used in improvements and expansion are bought for investment to make profits and are bought either from profits or from capital the raising of which is made possible by profits.

This brings us squarely up against the *fact* regarding the economic theories and policies that have attained such vogue within recent years which is of the most vital importance.

Blueprint for a Depression

That *fact* is, that every one of these theories and policies contemplates temporary or permanent reduction of business profits. When N. R. A. and other similar government measures to increase consumer purchasing power were adopted a dozen years ago their protagonists urged business to accept philosophically the only temporary curtailment of profits that their protagonists said would be caused until business could get the large increase of profits due to the great expansion of production and commerce that would result. But because these measures restricted profits, the promised expansion of production and commerce did not occur, and the nation remained in the slough of depression until the government created a vast market by beginning, at the cost of hugely increased taxes and deficits, to make huge purchases for war.

Now you hear again—in a recent speech by President Truman, for example—appeals to business to be satisfied with profits again to be only temporarily restricted by advances in hourly wages, and by ceilings on prices, rates and rentals, until the great consumer purchasing power to be ereated by these means and by government spending shall cause an unprecedented volume of peacetime employment and production, with resulting large profits.

It is N. R. A. all over again—with some exceptions. The nation is not now in the midst of depression, as in 1933. There is a great accumulation of need for all kinds of goods that did not exist then. And business and the people have large accumulations of funds with which they desire to buy these goods. There are but two important obstacles now in the way of a period of great prosperity. One is, that the indebtedness of the federal government is fifteen times as large now as it was in 1933—so large that it already threatens uncontrollable inflation. The other is, that so many of our statesmen are obsessed with the new economics which holds that consumer purchasing power, maintained by more pay for less work, restricted business profits and unrestricted government spending and increase of the government debt are the roval road to "full employment" and "abundance for all." Did I say, "new economics?" It is really not new, but very old, as Kipling indicated when he said in a poem written fourteeen years before the New Deal was invented:

> "In the carboniferous epoch they promised abundance for all,
> By robbing selected Peter to pay for collective Paul;
> But though they had plenty of money, there was nothing their money could buy;
> And the gods of the copy-book headings said: 'If you don't work you die.'"

You see, in the very earliest age of known animal life, according to Kipling, they were already trying to create "abundance for all" by New Deal methods instead of by working and producing; and, long ago, they destroyed their purchasing power by inflation, as we shall, if we continue accepting the "new," but also very old economics of "robbing selected Peter to pay for collective Paul."

We must decide now whether we really are or are not going to rely upon private enterprise for the high level production and employment that will be essential in future, as they have been in the past, to the welfare of all our people, and especially of those whose natural capacities will always, under any policies, excepting socialist policy of equal poverty, restrict them to less than average incomes. And to this end we must combat to the utmost the increasingly prevalent belief that the incomes of the masses can best be increased by artificially restricting the profits of private enterprise and incomes derived from those profits. For *profits restricted only by competition, and incomes derived from those profits, are the essential driving force of private enterprise,* which is the only system that ever can provide abundance for all. From profits must be derived the capital, the continuous and increasing investment of which is essential to continued increase of production and income per worker.

And yet the profits of private enterprise are the real objective of attack of all the new government policies that have been advocated within the past dozen years ostensibly to increase "consumer purchasing power." Profits would be artificially restricted by keeping ceilings on prices, railway rates and rentals of housing regardless of increases in labor costs.

Taxing Business to Ruin It

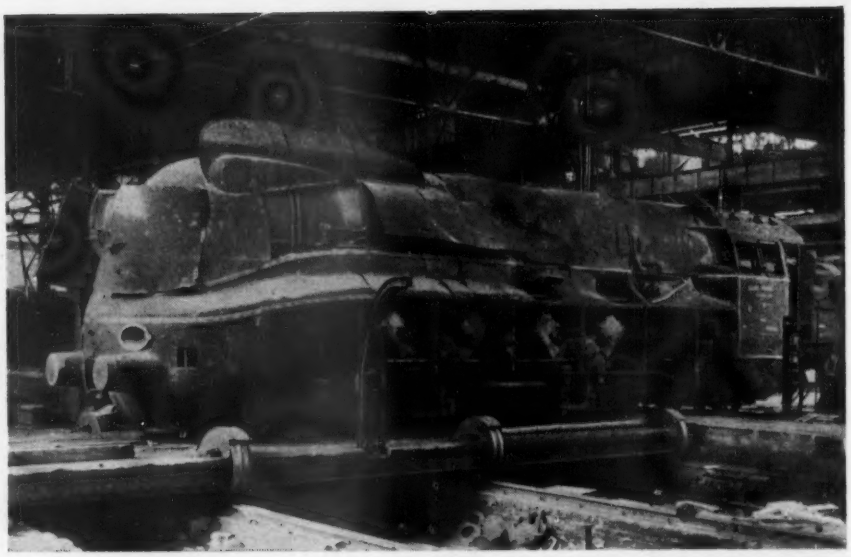
Profits would be restricted by the levying of high taxes on railroads and other forms of private enterprise to raise money for huge government spending. And profits are cut with a two-edged sword when government not only burdens private enterprise with heavy taxes, but then takes these taxes and so spends them on means of transportation, "valley authorities," public housing, and so on as to subsidize competition with the private property and privately-owned industries from which the taxes are collected.

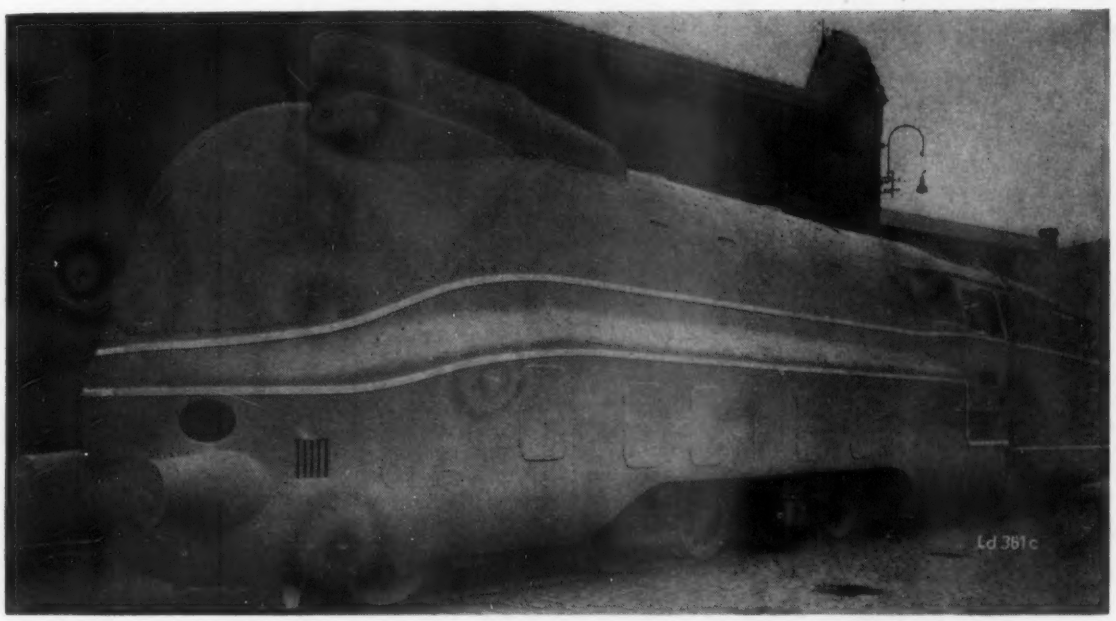
The fundamental issue with which we are confronted is that of private enterprise versus national socialism, for *whoever seeks by whatever means excepting fair competition to restrict the profits of private enterprise and income derived from those profits seeks thereby to prevent private enterprise from functioning efficiently.* And the greatest present menaces to the future efficient functioning of private enterprise are government policies of fostering labor monopolies, of restricting prices and railway rates regardless of labor costs, and of heavily taxing private enterprise for the purpose of raising money with which to subsidize both competition of some private industries with other private industries and government competition with private enterprise in many fields.

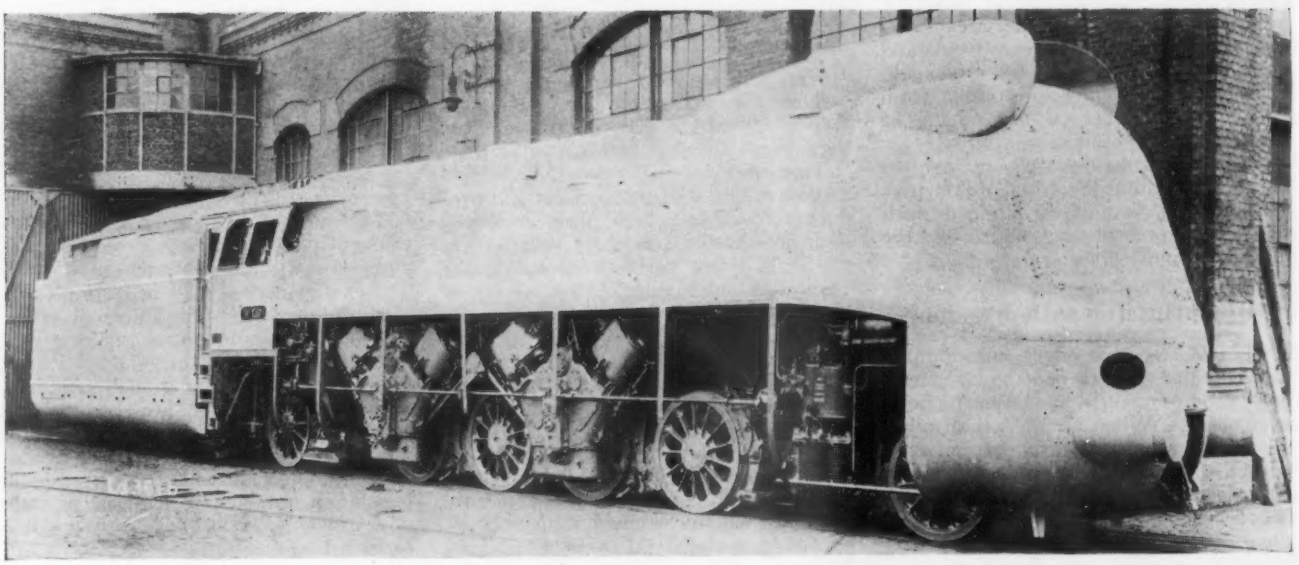
The more effect is given to such government policies the less profits private enterprise will make, the less production and employment it will be able to provide, the more demand there will be for more government controls, taxing and spending and the farther we will advance on the road toward national socialism. We must decide the issue of private enterprise versus national socialism in favor of private enterprise now by defeating the great volume of socialistic legislation now pending, for its passage now probably would make it impossible to turn back.

German War-Developed Locomotive

The high-speed passenger locomotive with individual axle drive illustrated on this page was built by Henschel & Sohn in 1941 and is said to have operated in fast express service between Hamburg and Berlin until May, 1945. Found in the much battered, but not seriously damaged, condition shown in one of the photographs, it was repaired by the 757th Railway Shop Battalion at Kassel and will be brought to the United States. Driven by four two-cylinder V-type steam engines, the crankshafts of which are flexibly connected to the driving wheels on individual axles, the locomotive weighs 216,000 lb. on drivers and develops a tractive force of 36,000 lb. The driving wheels are 50 in. in diameter and rotate at 740 r. p. m. at the top speed of 110 miles an hour. The cylinders are 12 in. by 12 in.; the boiler pressure, 240 lb. per sq. in.







Rules for Train Telephone Service

F. C. C. proposes rules and regulations for governing the use of radio for train communication

TENTATIVE rules and regulations governing the application and use of radio for train communication have been issued by the Federal Communications Commission. In general, these rules conform with preliminary drafts which were discussed with the Commission's staff by the A.A.R. Committee on Radio and Allied Communications as applied to railroad operation. The new rules, dated November 15, are issued with the provision that any interested party may, within twenty days, file exceptions and request oral argument.

Pending the establishment of railroad radio service on a regular basis, the Commission has encouraged vigorous experimentation in this type of communication by railroads and equipment manufacturers. To date, the Commission has received 131 applications for experimental licenses in this service and has granted 129. The applications were filed by 19 companies and individuals. Of the applications granted, 38 were granted before V-E Day and 91 since.

Technical Contributions

A number of experimental reports now on file with the Commission indicate that valuable technical contributions are being made towards increasing the safety and efficiency of railroad travel through the use of radio. The Commission has also announced that it is considering relaxing the present low-power rules governing railroad carrier-current train communications system. The rules and regulations deal with definitions, licenses, applications, technical specifications, scope of service, records, tests, and miscellaneous requirements.

Licenses

Eligibility for license. Authorizations for various classes of stations in the railroad radio service will be issued only to persons or organizations operating as railroad common carriers. Experimental authorizations may, however, be issued to communications common carriers for the purpose of providing railroad radio service.

License period. Unless otherwise stated in the authorization, licenses for all stations in the railroad radio service will be issued for a period of two years, or such shorter period as may be necessary to provide for the expiration of all licenses at the same time (3 a. m. Eastern Standard Time on February 1).

Posting station licenses. (a) The license of each station operated at a fixed location must be posted at a convenient place where the transmitter is located. (b) The license covering each portable and mobile station is to be retained in the files of the licensee and remain available for inspection upon request by any authorized representative of the Commission. (c) A license verification card issued by the Commission and certifying to the licensed status of each portable or mobile unit is to be attached to each portable or mobile transmitter.

Applications

Application for authorization for stations operated exclusively on railroad rolling stock. A construction permit is not required for stations located and operated exclusively on railroad rolling stock, but a station license is required for each such station. A single license application may be submitted covering any designated number of identical mobile transmitter units of the same class of station.

Application for authorization for portable or mobile stations not operated exclusively on railroad rolling stock. (a) A construction permit and station license is required for all transmitter units of portable or mobile stations not located and operated exclusively on railroad rolling stock. A single construction permit application may be submitted covering any designated number of identical portable or mobile transmitter units of the same class of station. (b) An application for a license covering any number of identical portable or mobile transmitter units of the same class of station may be submitted after completion of construction or installation of such transmitter units in accordance with the terms of the construction permit.

Application for authorization for stations at fixed locations. (a) An individual construction permit application shall be submitted for each station to be located and operated exclusively at a fixed point. (b) An application for a license for each station at a fixed location may be submitted after completion of construction or installation of the station in accordance with the terms of the construction permit.

Application for renewal or modification of licenses. An individual application may be submitted for the renewal or modification of any station license in the railroad radio service; or a blanket application may be submitted for renewal of a group of station licenses of the same class or for modification of a group of station licenses of the same class where the modification requested is the same for all stations covered by the application. The radio stations covered by a blanket application are to be clearly identified therein.

Technical Specifications

Frequencies. The following frequencies (in megacycles) are allocated to the following classes of stations in the railroad radio service.

(a) To train radio stations primarily for stations on board railroad rolling stock and for land stations primarily for use in communicating with stations on board railroad rolling stock:

158.43	159.15	159.87	160.59	161.31
158.49	159.21	159.93	160.65	161.37
158.55	159.27	159.99	160.71	161.43
158.61	159.33	160.05	160.77	161.49
158.67	159.39	160.11	160.83	161.55
158.73	159.45	160.17	160.89	161.61
158.79	159.51	160.23	160.95	161.67
158.85	159.57	160.29	161.01	161.73
158.91	159.63	160.35	161.07	161.79
158.97	159.69	160.41	161.13	161.85
159.03	159.75	160.47	161.19	161.91
159.09	159.81	160.53	161.25	161.97

These frequencies may also be used on a secondary basis for intercommunication between adjacent land stations provided interference is not caused to the train radio station service for which the frequencies are primarily allocated.

(b) To yard and terminal and railroad utility stations: (1) All frequencies in paragraph (a) of this section except 158.43, 159.09, 159.57, 159.81, 160.53 and 161.01 Mc., provided interference is not caused to train radio stations. The application requesting assignment of these frequencies for use by yard, terminal or railroad utility stations is to show why interference will not be caused to train radio stations. (2) Specific frequencies to be designated within the following television channels—44-50, 54-60, 60-66, 66-72, 82-88, 186-192, 192-198, 198-204, 204-210, 210-216 Mc. Frequencies so designated will be assigned on a mutually non-interfering basis subject to such additional limitations and restrictions as may be deemed necessary.

(c) The assignment of any of the frequencies enumerated above in paragraphs (a) and (b) may be restricted in use to one or more specified geographic areas and may be authorized for use by one or more licensees.

(d) The frequency or frequencies immediately available for assignment to any particular area or railroad may be ascertained by communicating with the secretary of the Federal Communications Commission, Washington, D. C.

Emissions. Types A-1, A-2, A-3, A-4 and special emission (1) for frequency modulation for telephony, and (2) for operation of signaling, calling and simi-

lar devices, may be authorized for stations in the railroad radio service. Where special emission other than frequency modulation for telephony is requested to be authorized, the application is to describe the type of emission in complete detail.

Modulation and band width. (a) In the case of amplitude modulation the carrier is to be modulated to a sufficiently high degree to provide effective communication, but the modulation is not to exceed 100 per cent on peaks. (b) In the case of frequency modulation the maximum positive or the maximum negative frequency deviation arising from modulation plus the deviation of the carrier from the assigned frequency due to frequency instability is not to exceed 30 kc. In all cases, the emissions are to be confined within the assigned channel to the extent permitted by the development of the art.

Frequency stability. The carrier frequency of stations in the railroad radio service is to be maintained within 0.005 per cent of the assigned frequency.

Frequency measurements. The licensee of each station is to employ a suitable procedure to determine that the carrier frequency of each licensed transmitter is within the prescribed tolerance and is to make such determination at least once each six month. The results of these determinations and the signature of the person making the determination are to be entered in the licensee's records.

Power. The power which may be used by a station in the railroad radio service is to be no more than the minimum required for satisfactory technical operation commensurate with the size of the area to be served and local conditions which affect radio transmission and reception. The normal power is not to exceed 100 watts input to the final radio frequency stage of the transmitter. Power in excess of this amount may be authorized where data in support of such request are submitted clearly showing the need for higher power.

Operating Specifications

Permissible transmissions. Stations in the railroad radio service may be used only for transmissions relating to and essential to operation of railroads.

Points of communication. In accordance with the provisions of Section 16.81 on permissible transmissions for stations in railroad radio service, these stations may be used to communicate with: (a) Other stations in the railroad radio service licensed to the same licensee or receiving stations operated by the same licensee. (b) Stations in the railroad radio service licensed to other licensees or receiving stations operated by other railroads where cooperation or coordination of activities is necessary in connection with railroad operations. (c) Licensed stations in other radio services and U. S. government stations or receiving stations in case of an emergency or impending emergency jeopardizing life, public safety, or important property.

Coordinated service. Any applicant for an instrument of authorization, or existing licensee, proposing to furnish a coordinated railroad radio-communication service to one or more railroads eligible under the Commission's rules for railroad radio station authorizations is to make specific notarized request, in duplicate, for authority to furnish such service. The request or application for such authority is to contain a complete description of the service to be rendered, the terms and conditions upon which such service is to be rendered or exchanged, including the details of any arrangements for the sharing of capital investment or operating expenses and the basis of any charges to be made for the rendition of such service. Copies of all agreements or other arrangements including written statements of any oral agreements or arrangements relating to such services are to be attached to the application.

Records

Station Record. All stations in the railroad radio service operated at fixed locations are to maintain records showing: (a) Names of railroad employees who use the radio transmitters. (b) Results of maintenance tests made pursuant to Section 16.122 on service tests. (c) Failure or improper operation of radio transmitting equipment. (d) Where an antenna or antenna supporting structure(s) is required to be illuminated:

(1) The time the tower lights are turned on and off, if manually controlled.

(2) The time the daily visual observation of the tower lights was made.

(3) In the event of any observed failure of a tower light: (i) Nature of such failure; (ii) Time the failure was observed; (iii) Time and nature of the adjustments, repairs or replacements made; (iv) Time notice was given to the Airway Communication Station (C. A. A.) of the failure of any tower light not corrected within thirty minutes; (v) Time notice was given to the Airways Communication Station (C. A. A.) that the required illumination was resumed; and

(4) Upon completion of the periodic inspection required at least once each three months: (i) The date of the inspection and the conditions of all tower lights and associated tower lighting control devices; and (ii) Any adjustments, replacements or repairs made to insure compliance with the lighting requirements.

Required retention period. Records required by the railroad radio service rules shall be retained by the licensee for a period of at least one year.

Tests

Equipment tests. Upon completion of construction of a radio station in exact accordance with the terms of the construction permit, the technical provisions of the application therefor and the rules and regulations governing the station and prior to filing of application for license, the permittee is authorized to test the equipment for a period not to exceed ten days, provided, however, that the inspector in charge of the district in which the station is located is notified two days in advance of the beginning of tests and the permittee is not notified by the Commission to cancel, suspend or change the date for the period of such tests.

Service tests. When construction and equipment tests are completed in exact compliance with the terms of the construction permit, the technical provisions of the application therefor, and the rules and regulations governing the station, and after an application for station license has been filed with the Commission showing the transmitter to be in satisfactory operating condition, the permittee is authorized to conduct service tests in exact accordance with the terms of the construction permit for a period not to exceed 30 days, provided, however, that the inspector in charge of the district in which the station is located is notified two days in advance of the beginning of such tests and the permittee is not notified by the Commission to cancel, suspend or change the date for the period of such tests.

Service tests are not authorized after the expiration date of the construction permit.

Maintenance tests. All licensed stations in the railroad radio service are to be tested as may be required for proper maintenance of the stations and the railroad radio communication system. All necessary precautions are to be taken, however, to avoid interference with other stations and test time shall be kept to the minimum commensurate with insurance of reliable communication.

Miscellaneous

Station identification. Each station in the railroad radio service shall be identified during each communication or exchange of a series of communications. During an exchange of communications exceeding fifteen minutes in length, each station is to be identified at the end of each 15-min. period. In lieu of assigned call letters, identification may be made by the name of the railroad and the train number, caboose number, engine number or name of fixed wayside station; or, if that is not practicable, by such other number or name as may be specified by the railroad concerned for the use of employees of the railroad to identify the fixed point or mobile unit where the radio station is located. Where identification is made other than by train number, caboose number or engine number, a list of such identifications is to be maintained by the railroad. An abbreviated name or initial letters of the railroad may be used where such name or initial letters are in general usage. In those cases where it is shown that no difficulty would be encountered in identifying the transmissions of a particular station, as for example where stations of one licensee are located in a yard isolated from other radio installations, approval may be given to a request of the licensee for permission to omit station identification.

Who may operate stations. Stations in the railroad radio service may be operated only by persons holding commercial radio operator's licenses issued by the Commission and in accordance with the rules governing commercial radio operators or by employees of the station licensee meeting the qualifications prescribed by the Commission and in accordance with the limitations prescribed by the Commission in its Order No. 126 for operation by such employees.

Inspection of stations. All classes of stations in the railroad radio service are to be made available for inspection upon request of a representative of the Commission except where serious interference with a railroad operation in progress or immediately impending would result, in which event the station is to be made available immediately upon termination of the operation or at such other time as may be satisfactory to the Commission's representative.

R. R.'s in Invasion of Europe

Colonel Bingham reveals that it would have taken 3½ years to have landed necessary rolling stock if conventional means had been used

COLONEL SIDNEY H. BINGHAM, assistant superintendent of transportation, New York City Transit System, on November 15 reviewed for the members of the New York Railroad Club his war-time experiences as a Transportation Corps officer in Europe. On his arrival in England in June, 1942, he was assigned as liaison officer to the director of transportation of the British army. Thereafter he served on a committee which designed and supervised the construction, in England, of joint British-American hospital trains. He was then named a member of the "Cross-Channel Committee," which planned and supervised the ferrying of railway rolling stock across the English channel in the invasion of the continent.

Colonel Bingham also served with the Twenty-first Army group, which planned, jointly with the British, for future operation of the railways of the continent. He assisted in the selection of continental railway targets for the attention of the bombers of the Eighth Air Force, and was a member of the technical committee responsible for the assembly of American railway rolling stock in England.

Size of Railway Forces

Colonel Bingham revealed that over 50,000 freight cars and more than 3,200 steam and Diesel locomotives were landed in Europe and that, on V-E Day, there were 1,767 American officers and 36,665 troops engaged in railway work in the European Theater. In addition to the equipment sent over from the U. S. A., the following equipment was constructed in Europe:

37 hospital trains of 21 cars each, fully equipped
18 mobile repair shops
30 wrecking trains, equipped with cranes
60 "break-down lorries" (i.e., highway trucks equipped with tools for railroad repairs)
20 work trains for track and bridge construction

These work trains were landed across the Normandy beaches from LCT-4's, each of which would handle four 20-ton flat cars and a 25-ton, 150-hp. Diesel locomotive—each car and locomotive loaded on a trailer which was pulled onto the beach by a 7-ton prime mover (see *Railway Age* of August 12, 1944, page 271, for photographs of this operation). The LCT-4 also carried a crew to man the work train, once it was landed. Fourteen of these LCT-4 loads were landed on the beaches without loss, 8 units U. S. and 6 British. With this equipment available, Army engineers were able to lay tracks down to seaplane ramps in the water, permitting the use of the larger LST-2 landing vessels.

Rail Invasion Unprecedented

Colonel Bingham pointed out that never before in history had railroad rolling stock thus been landed in an enemy country. If ordinary train-ferry services had been relied upon, it would have taken 3½ years to have landed the volume of rolling stock which the invading armies took with them. Because of the 26-ft. tides, there were only 90 min. in each 12 hours when beach-landing operations could be carried out, and the shallow-draft vessels were hard to maneuver when there was much of a wind.

"Experimentally we laid track in an LST," Colonel Bingham went on to explain. "Because of head-room clearances the track consisted of 1-in. square stock welded to the third deck; we also had to take into consideration that the LST's had to be used for tanks on D-Day, and some scheme had to be devised whereby the tanks could move over the three parallel tracks without ripping them up. The reason for laying the track before the invasion was when the ground forces had finished with the LST-2's we could immediately put them into operation, and not have to wait until the tracks were laid, which would have taken 36 hours for each LST. For this operation we had 54 LST's.

"The width of the third deck permitted the laying of three railway tracks, and, in order to make the best use of the available deck area, switches were dispensed with, and the three tracks converged at the entrance ramps. Twenty-five-degree curves were used, and by this means 85 per cent of the area was available for loading purposes.

Loading the LST's

"The rail used on the LST's consisted of 1-in. steel bars, welded to 6-in. wide by ½-in. thick longitudinal steel strips. Each rail consisted of two of these 1-in. square bars, spaced 2 in. apart, which provided ample check to the wheel flange. The strips were made up in 8-ft. sections and were welded directly to the deck with 3-in. tack welds at 2-ft.-6-in. centers staggered on either side of the strips."

Colonel Bingham went on to explain in some detail the structural modifications necessary in the LST to facilitate the loading and unloading of rolling stock. Continuing, he said:

"Breathing Bridges"

"On D-Day plus 25, the engineers, including myself, put down at low tide on a Normandy beach 5 seaplane ramps. We used a 75-lb. flat bottom rail, which was grouted into the concrete, making the rail flush with the ramp in case the ramp would have to be used for other purposes. After this we erected the 'breathing bridges.' As the tide changed, the shallow draft LST's advanced or receded, on the concrete structure, disgorging cars onto a wheeled ramp.

"This ramp traveled back and forth on the same rails on which the cars rolled, thus bridging the gap. Ten days later we started pushing converted LST's or, as the Navy called them, 'Rail-Fitted LST's,' across 100 miles of open water to the Cherbourg peninsula.

"Each LST carried 22 cars, or 21 cars and a Diesel locomotive. All cars were fully loaded with food, ammunition and every type of equipment needed for the invading forces. The usual time for loading an LST in England was 26 minutes, and 21 minutes to unload in France. The British used this same plan in their landings at Calais and Dieppe, and the U. S. forces used it likewise in transporting the railway equipment from North Africa and Italy to Southern France. By mid-October, aided by some of the Cherbourg docks, which accommodated the pre-war cross-channel ferries, we had delivered a total of over 25,000 freight cars and 1,300 locomotives. The seeming delay in delivering the big locomotives was part of the plan. General Sir Bernard Montgomery stated flatly that he would have no steam locomotives in his area of operations during the critical weeks. He said that the railroad crews were right behind the front lines, and the smoke and steam

made targets for enemy artillery. This necessitated using Diesels in the initial landings.

R. R.'s Necessary to Victory

"The second battle of France could not have been fought without the Military Railway Service, and imported cars and locomotives—since, of the 25,000 locomotives which the French railways normally operated, less than 4,000 were found, and most of these were in need of repair. It is now history that logistical support for the Western European campaign in a large degree depended on the rapid utilization of the railways.

"The Motor Transport Division of the Transportation Corps with its Red Ball Highway provided an invaluable supplement to the basic rail service. It is a credit to the Army Corps of Engineers that it was able to renew the rail network as rapidly as it did. The exceptionally fast advance of our armies across France, and, after the breakthrough, into Germany, of course, facilitated this, because organized demolition by the enemy was impractical in the time available.

"The use of Great Britain as a base for erecting railway rolling stock and the work of the complex cross-channel ferrying system, making possible the early utilization of the railways as a supplement to the motor transport available, in my judgment, was the outstanding contribution of the Military Railway Service to the overall problem of the Transportation Corps to furnish the necessary transportation to our victorious armies. The equipment on the whole was excellent for the job required, but above all should be mentioned the spirit and frequently heroic efforts of the individual men—American railroad G. I.'s—who actually did the work in the field.

"The job in Europe is not done, merely because the active fighting has stopped. Thousands of railway troops as well as other American soldiers will be required for an unknown period, to insure the winning of the peace in Europe as well as the war."

In Praise of Command

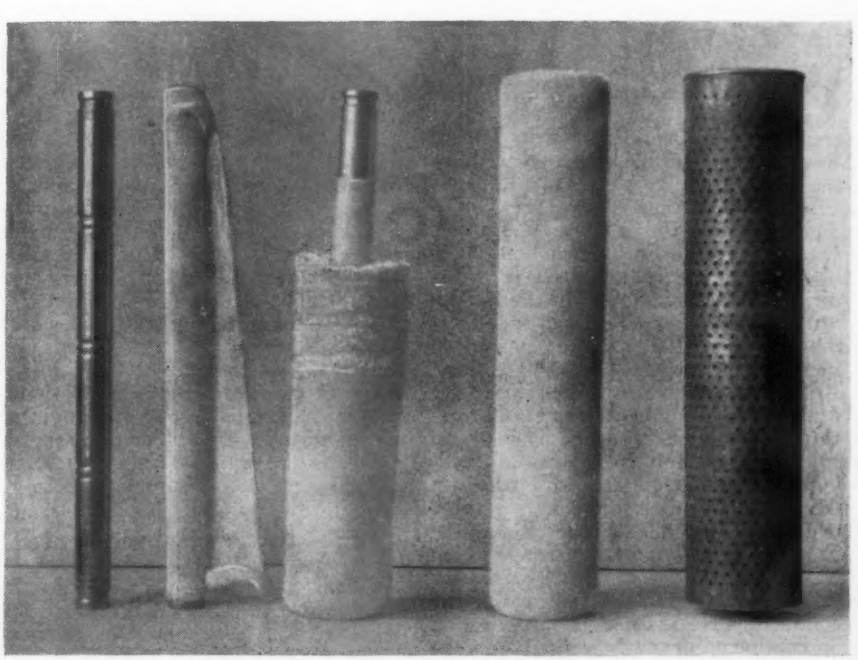
Colonel Bingham closed his address with a tribute to the officers in command of the Transportation Corps—Major General Charles P. Gross, Major General Frank S. Ross, Major General Carl R. Gray, and Brigadier General Jack Appleton—and to General Eisenhower, who, Colonel Bingham said, "was, without doubt, the most humble, modest and efficient of all generals."

M. & J. Filter Element

The sock-type filter element, originated and now being marketed by the M. & J. Diesel Locomotive Filter Company, Chicago, is designed as a replacement unit which may be quickly and easily applied in the lubricating oil filters of Diesel locomotives to give superior service in removing foreign matter from the oil, and prevent lint and small pieces of waste from getting into the oil lines, engine cylinders, bearings, oil sump, etc.

The principal advantages claimed for the new filter element include more reliable engine operation with reduced hot bearings, increased mileage between oil changes, less time required to clean and repack oil filters, reduced damage to oil filters and screens since the new filter element slips easily in place and hand-packed waste is not forced into the filter with excessive pressure and often very irregular results. In addition, damage to oil-sump screens is avoided and these screens will require cleaning much less frequently.

Referring to the illustration, the construction of the filter element will be apparent. A 2-in. sheet-metal center tube is 28 in. long and reinforced with ribs to prevent collapsing under oil pressures up to 150 lb. per sq. in. This center tube is perforated with 1/16 in. holes spaced 1/4 in. diagonally around the entire periphery of the tube to insure equal lubricating oil distribution throughout the length of the element. A 2 1/4-in. white knitted cotton tubing or sock, cut 70 to 78 in. in length is secured to the center tube so as to prevent slipping and has sufficient elasticity to cover 7 lb. of filter material without bursting. This cotton sock is shown in the second view from the left and rolled back to show a section of the metal tubing and of the uniformly packed filtering material in the center view. The complete element is shown next and the lubricating-oil filter in which it is applied, at the right.



Details of Construction of the M. & J. Filter Element Used in Diesel Engine Lubricating Oil Filter (Right)

The filtering material consists of fine white single-strand spooler threads delinted during the course of machining, thoroughly combed and free of lumpy tangled threads, sizing, shredded rags, synthetic fibre, or other substance foreign to high-grade white cotton thread. Seven pounds of this filtering material with seven per cent maximum moisture content and two per cent maximum oil and dirt are uniformly packed by machine in the filter element which has an outside diameter of six inches. This uniform packing contributes to more satisfactory filter operation inasmuch as former hand packing methods not only damage the filter but tend to cause too tight packing and stoppage of oil flow in one part of the filter when possibly another part is too lightly packed and hence does not produce the desired filtering effect. The M. & J. filter element is slightly longer than the filter so that when the cover is applied the element is sealed top and bottom causing oil to pass through it. The frequency of packing depends upon the number of filters in any particular locomotive, but in any event is much less than formerly required.

Each filter element is used only once and at the end of its period of service the oil is squeezed out and the waste reclaimed for further use in wiping or journal box packing.

COMMUNICATIONS . . .

Poster Contest for High School Students

Buffalo, N. Y.

To the Editor:

Passing some AAR posters, I was led to wonder who had drawn them; though effective, they were so simple that any juvenile art student could have designed them. And thereby hangs this letter.

Why shouldn't schoolchildren have drawn them?

I am aware that contests of this sort cost more and give more trouble than professional work—but who is going to ride tomorrow's trains if the railroads fail to maintain the interest of today's children? The airlines are well aware of this, and are working mightily to bring every possible mention of aeronautics into school curricula. Nothing is wrong with this, but why should the railroads neglect an opportunity to gain juvenile interest? Planes, buses, private autos—all are familiar to the younger generation; but only a few wartime trips (usually under crowded conditions) have ever been made by most children.

The New York Central encouraged interest in its 1941 Empire State Express by offering high school contest winners a trip over its lines to Dearborn. Surely every large road has some uncrowded run today where half a dozen children wouldn't congest trains—in any case every railroad will have in a few months. What better way to arouse interest in children (and their parents) than a railroad holiday—if possible in the shiniest streamliner?

Shortly before the war, a class of primary-grade students rode from Erie to Westfield, as I recall—and the press pointed out that this was the children's first train-ride in most cases. Isn't that a warning to the passenger departments? Perhaps the grammar-school level isn't too important immediately—but why shouldn't high school art departments be offered a chance to design advertising posters now and then? The results will be worth the supervisory effort—even if the posters are thrown away (as is not likely).

Wm. C. Kessel.

Need for Impartial Study of R. R. Situation

New Orleans 11, La.

To the Editor:

I read with interest your editorial in your November 3 issue entitled "Public Uninformed of Railroads' Handicap," also the article beginning on page 717. The seriousness of the situation presented will unquestionably make a strong appeal to those having at heart the interest of the railroads in this country.

Pursuant to your invitation to submit suggestions, I respectfully suggest the competent independent inquiry be made by the Brookings Institution. Its fine reputation causes people generally to place much credence in its findings. When its task is completed, the life and fire insurance companies and business investment houses and banking institutions, all of whom have substantial investments in railroad securities, should unite in a voluntary effort to get this question properly before the people. Almost every person holds some kind of insurance policy, and a few of the more fortunate some securities, and when they are brought to a realization there is possibility of some adverse effect upon their holdings as a result of the local, state, and national governments squandering tax funds for the purpose of subsidizing practically every form of transportation competitive with the railroads, they should be induced to enter proper protest with their elected representatives, insisting that all of these proposed ventures be self-sustaining before work is undertaken.

For many years railroad officers generally have taken advantage of opportunities to get the "railroad problem" before the public, with disappointing results. Generally, people appear to view utterances of railroad men in these matters in a somewhat cynical way, largely because of their attitude of classifying everything under the head of propaganda.

The present seems to be an opportune time to get the plain issue before the public, a large majority of whom are sympathetic toward the railroads because of their knowledge of the fine job the railroads did during the war. While this thought is in their minds they should be more sympathetic to an appeal for fair play if the facts were made known by some group or organization not directly connected with the railroads or those dependent upon them for their livelihood.

J. E. Carter,
General Freight Agent, S. P. Lines

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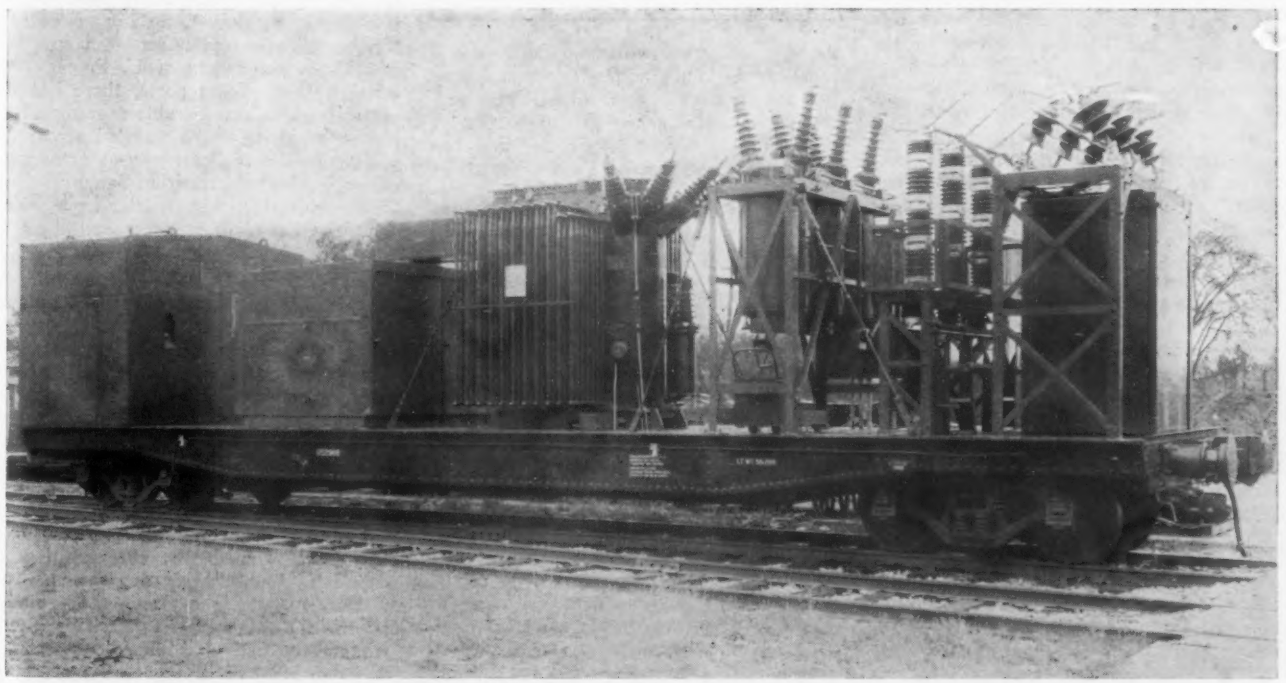


Railroad-Mounted Unit Substation Built by the General Electric Company for the Russian Government

Fifteen of these units will be used in the rehabilitation of towns and cities that were devastated by war and will serve the electrical needs in war-torn areas and maintain service until permanent substations can be built for these areas. The entire substation, permanently mounted on a flat car, weighs 111,000 lb. It is rated 1,800 kva. with a high voltage of 35,000 volts, which can be stepped down to 3,150 or 6,300 volts. While being moved on American railroads, the trucks on the car are standard, American gage, but wider Russian trucks are being shipped with the unit to be installed at the port of entry.

GENERAL NEWS

Urges Adequate User Tolls for Waterways

Chicago Commerce Association favors making all transport self-supporting

In a submission to the House Committee on Interstate Commerce—as requested by Chairman Clarence F. Lea in the broad inquiry he is conducting into national transportation policy—the Chicago Association of Commerce has gone on record as favoring user charges on all government-owned transport facilities. In a summary of the expression of the Chicago Association of Commerce issued by the Railway Business Association, its position respecting "user charges" is set forth as follows:

"The Chicago Association of Commerce is of the opinion that it is not sound to continue the present policy of financing a large part of our transportation facilities through government appropriations and expect the remainder to be financed by private interests.

"Under our present policy some carriers are aided more than others. The shippers of the country and the public will be better served by a system of transportation which results in the lowest cost, but to determine such cost all factors must be taken into account. While the very nature of the construction of some facilities, such as waterways, highways, and airways, must be done by the government, a method of financing under which the user pays for such construction rather than the general taxpayers seems not only desirable and equitable, but necessary to a preservation of our private enterprise system.

To Foster Economy—"A user charge has the further advantage of providing a broad restraint upon development of uneconomic projects, a better basis for competitive relationship between the different modes of transportation while lessening the disadvantages inherent under our present policy, and of developing a national properly coordinated transportation system within which each mode of transportation will perform that service which it can perform most efficiently at the lowest true cost. It is, therefore, recommened by the Chicago Association of Commerce that a policy be adopted to finance such transportation facilities as are constructed by government for domestic transportation purposes by a user charge based upon the extent of the use.

"This theory is not new but is not at present generally applied. Railroads are privately owned and pay for their own improvements. Highways carriers, through license fees and taxes, pay for construction and maintenance of highways. Air carriers to a lesser extent are paying for part of the cost of airports through landing and rental fees. While waterway carriers pay for use of some port facilities, they generally pay nothing for use of harbor or river construction, maintenance, and improvement. The Panama canal operated by a government corporation as a public service enterprise is financed by the use of tolls. In 1940 expenditures on the canal totaled $14,807,000. Income amounted to $26,000,000. A fixed capital charge of $14,435,000 resulted in creating an accounting deficit of $3,181,000.

Treat All Alike—"It seems essential that in the postwar period a uniform policy be established under which extravagant and uneconomic transportation facilities will not be constructed and under which a sounder basis for competitive relationship between different types of carriers may be established. The present policy does not permit a fair determination of cost, and consequently the development of a national transportation system under which each type of carrier will perform the service for which it is best adapted, cannot be developed.

"It is further recommended by the Chicago Association of Commerce that before public funds are appropriated for any project for which a transportation value is claimed Congress should have findings from the Interstate Commerce Commission that the

(*Continued on page 872*)

Have We Learned Nothing from Nazis' Failure?

When Hitler started to destroy the free markets of Germany and the world and to run everything from Berlin, the manufacturers crowded the trains to the seat of power crying, "Put the squeeze on some one else." Then the dealers and retailers took the next train. "You are ruining us. Take it out of the hides of labor, or the peasant." Then everyone got the local Nazi leader to go to Berlin with them to pull wires. And thus 80,000,000 people got so deeply enmeshed in government favors, subsidies, and bribes that a single man led them to death and destruction.

Aren't we going down the same bitter path? Some, apparently don't care for liberty, but they do care for jobs. A business man today is like a man driving an automobile with the steering wheel locked—by government. The economy of the nation struggles to move in the slowly hardening mucilage of government.

If Jefferson was right—and Hitler was wrong—we Americans have an important decision to make.

—SAMUEL B. PETTINGILL.

Peak of Troop Travel Now Confronts Roads

This month and next will top million-men-a-month loads handled since July

Having handled more than 1,000,000 members of the armed forces during each of the four consecutive months from July through October, the railroads now have upon them the heavier burden of carrying on through November and December when the peak of such movements will be reached, according to the latest report on the "National Transportation Situation," issued by Chairman Warren C. Kendall of the Car Service Division, Association of American Railroads. To accommodate the men returning through Pacific ports, Mr. Kendall revealed, it has become necessary to set up special arrangements for the handling of deadhead equipment trains, both Pullman and coach, to the West Coast in order to keep a steady flow of equipment to that area.

This is because approximately 85 per cent of the movements off the West Coast require sleeping cars; and in order to release as many of them as possible for that service, the Army and Navy have discontinued ordering sleepers for any move where the running time is under 48 hours. In addition to the return of U. S. personnel through West Coast ports, there has recently been a "considerable movement" of British repatriates who traveled across the continent to East Coast ports. They were moved in hospital cars from San Francisco, Calif., to Fort Lewis, Wash., from which point the Canadian roads moved them to Halifax or New York.

Cars for P. O. W.'s—Meanwhile, as Mr. Kendall put it, the coach situation is being "further complicated" by the request of the Army to move "large numbers" of German prisoners of war to East Coast ports for return to Europe. He explained that most of these prisoners are located at concentration camps in the West, thus making it necessary to relocate a large number of coaches in order to handle the assignment.

With respect to freight car conditions, Mr. Kendall noted that the situation in general "is not following the usual pattern at this season of the year." He pointed out that the fall peak is ordinarily passed prior to November 1, adding that this year "the high level of loading will apparently continue up to the holiday season." The departure is attributed by the C. S. D. chairman to strikes, reconversion plans of industry, the unprecedented agricultural crops, and the unusual situation with respect to return to this country of ammuni-

tion and other war material sent overseas for our armed forces. Thus he sees "no immediate evidence of lessening in the demand for freight car equipment."

No Box Car Surplus—Reporting on the mid-November situation by types of cars, Mr. Kendall noted that there has been "no decrease" in demand for box cars, particularly of the better grades, and there have been "some deficiencies in nearly all districts." The grain movement continues to make the greatest single demand for box cars, although there have also been heavy requirements for sugar loading, for loading of foodstuffs for export under the relief program, and for the handling of ammunition and other war materials being returned from the war zones.

Even though eastern and southern roads "do not have any surplus of box cars," the Car Service Division has nevertheless ordered them to assist the western lines. It issued an order, effective November 1, requiring specified eastern and southern roads to reduce the number of western ownership box cars on line by 10,000 at the rate of 2,500 per week during the four-week period ending November 28. And on November 8 certain eastern and southern roads were instructed to deliver, over and above their quotas for reducing western box cars on line, 200 system and miscellaneous ownership box cars daily, other than western cars.

"It is believed these measures will substantially improve the box car supply in Western territory without too seriously affecting the available supply in eastern and southern areas," Mr. Kendall said. "Even with this additional assistance, in view of prospective continued heavy demands, it is expected the box car supply will remain tight in all sections for at least the balance of this year."

Few Autos Loaded—As for automobile cars, there has been only "limited loading" of passenger automobiles and trucks, because the unsettled labor situation has prevented the industry from getting into full production. The prevailing uncertainty makes it difficult to venture any accurate forecast, Mr. Kendall added.

He went on to report that the loading of livestock "continues in heavy volume in all sections and particularly in western originating areas, and there has been difficulty in fully protecting all requirements for stock cars at all times." However, Mr. Kendall expected the heavy loadings to begin to subside by the end of last week. With respect to coal loadings, he noted the heavy volume since termination of the miners' strike. "This heavy loading," he added, "can only be maintained if shippers, receivers, and carriers concentrate on the prompt handling of loaded and empty coal cars to insure a steady flow of empties to the mines."

The supply of gondolas is "satisfactory," even though there has been considerable demand for them to handle imports of returning war materials. And the supply is expected to be augmented as gondolas now in sugar beet service are released, the harvest peak having been passed. The supply of both plain and heavy capacity flat cars "is somewhat in excess of requirements, with some lines reporting a surplus." The demand for covered hoppers continues heavy, but the available supply "has been spread carefully and most projects requiring covered hoppers are satisfactorily protected."

No Excess of Reefers—The supply of empty refrigerator cars "is adequate in all producing areas except a few diminishing spot shortages reported from Maine and the Pacific northwest." The estimated requirements for reefers for the next six months, Mr. Kendall went on, "indicate a tight situation will exist in all producing areas, but with the decline in war emergency traffic better handling of cars can be expected which will help to eliminate any possible deficiencies."

Discussing the l.c.l. situation the C. S. D. chairman called attention to the 10 per cent increase in October loadings compared with September, and to the fact that current loadings are running about five per cent ahead of last year. This trend was attributed to pre-holiday traffic, which is perhaps behind schedule on account of reconversion problems. There have continued to be "scattered instances" of freight house congestion, due in some cases to labor shortages and in others to labor difficulties in the trucking field, Mr. Kendall said. He added, however, that there had been no situations serious enough to justify regulation by embargo.

Dock Strikes Didn't Help—C. S. D. Embargo No. 589 placed against export freight moving through the port of New York was canceled October 19 following settlement of the longshoremen's strike, but the present bank of export cars held at New York and Philadelphia "is causing some concern, as most of the freight is contained in box cars and the delays being experienced by this type of car are serious, due to the general box car stringency." Thus an embargo was placed November 13 against British and United Nations Relief and Rehabilitation Administration export freight for New York when loaded in box cars. And on November 9 the Interstate Commerce Commission issued Service Order 368 which requires railroads to unload forthwith all loaded box cars held 10 days from date of arrival. As Mr. Kendall explained, this order applies only in cases where railroads have the responsibility to unload cars, and thus affects principally export, coastwise, or other rail-water shipments.

The situation with respect to carload shipments to Mexico "has not eased sufficiently so that all requests for permits can be granted," the C. S. D. chairman said. He added, however, that the congestion on the National of Mexico has been relieved to a considerable extent. He then went on to suggest that applications for permits to ship via uncongested gateways might be more favorably received if the loadings involved could be accommodated in open top equipment than if box cars would be required.

Mr. Kendall's report on the supply of equipment showed that there was a decrease of 6,627 in the number of serviceable cars —October 1 compared with September 1. The bad-order percentage on October 1 was 4.4 compared to three per cent on October 1, 1944. October detention reports indicated that the percentage of cars detained by shippers beyond the 48 hours free time was 16.82 compared to 14.58 per cent in October, 1944.

A. A. R. Will Honor Col. Johnson at Testimonial Dinner

Colonel J. Monroe Johnson, director of the Office of Defense Transportation, will be guest of honor at a dinner to be given by the Association of American Railroads at the Mayflower Hotel, Washington, D. C., on December 6. Government officials, members of Congress, railroad executives and other business leaders are among those who have been invited.

Southern Pacific Will Not Revive Morgan Line

The Southern Pacific has decided that it will not exercise the authority granted it by the Interstate Commerce Commission to resume operations of steamships between New York and Galveston and Houston, Tex., and between Baltimore, Md, and the two gulf ports This will mark the complete discontinuance of the Southern Pacific's Morgan Line service between North Atlantic and Gulf ports, which was established February 1, 1883, and which was interrupted in June, 1941, when the government requisitioned the Morgan Line fleet.

Promotion for Army Railroader

In addition to his former duties as personnel officer, army exchange officer and public relations officer of the 755th Railway Shop Battalion, Chief Warrant Officer Lawrence P. Johnson, a former employee of the Chicago, Rock Island & Pacific, has been appointed adjutant of his outfit, Headquarters, Transportation Corps in Paris, has announced.

Once in the salvage and reclamation department of the Rock Island, Mr. Johnson was assigned to the 755th at the time of his enlistment in 1941.

No N. R. A. A. Exhibit in 1946

At a meeting of the Board of Directors of the National Railway Appliances Association, held at Chicago on November 16, it was decided not to hold an exhibit in connection with the annual meeting of the American Railway Engineering Association in March, 1946. Some of the reasons for this decision are that many new products still in the development stage will not be ready for introduction at the time of the A. R. E. A. meeting; that travel, and especially hotel, conditions are expected to continue difficult; and that it was not possible to obtain the facilities for the exhibit that were desired.

Equipment on Order

Class I railroads on November 1 had 37,904 new freight cars on order, according to the Association of American Railroads. On the same date last year they had 30,408 on order.

This year's November 1 total included 12,549 hopper, 4,834 gondola, 1,222 flat, 14,811 plain box, 3,669 automobile, 769 refrigerator, and 50 miscellaneous cars.

The Class I roads also had 520 locomotives on order on November 1 compared with 519 on the same day in 1944. The former total included 117 steam and 403 Diesel-electric locomotives, compared with 102 steam, two electric and 415 Diesel-electrics one year ago.

Class I roads put 33,696 freight cars in

service in the first 10 months this year compared with 30,832 in the same period last year. Those installed this year included 7,665 hopper, 5,352 gondola, 490 flat, 239 stock, 1,826 refrigerator, 1,818 automobile and 16,207 plain box freight cars, and 99 miscellaneous cars.

They also put 522 new locomotives in service in the first ten months of 1945, of which 74 were steam and 448 were Diesel-electrics. New locomotives installed in the same period last year totaled 783, which included 287 steam, one electric and 495 Diesel-electrics.

Fuel Statistics—a Correction

On page 715 of the November 3 *Railway Age* the position of E. E. Ramey, chairman of the Committee on Fuel Records and Statistics of the Railway Fuel and Traveling Engineers' Association is incorrectly given in the footnote as superintendent fuel and locomotive performance, New York Central. Mr. Ramey is superintendent fuel conservation, Baltimore & Ohio.

C. N. R. Equips Yard with Radio-Telephone

Ten locomotives and two yard offices in the Longue Pointe yard of the Canadian National Railways at Montreal, Canada, have been equipped with radio-telephone receivers. Tests are being conducted, in which radio is used in place of written train orders and signals, to determine the value of this kind of operation.

Central control units are located in the offices; on the tender of each locomotive is a steel-encased radio having an aerial similar to those used on automobiles. There is a control box in each cab with a loudspeaker and a microphone. The system allows three-way communication, locomotive to locomotive, locomotive to central stations, and central stations to locomotive.

J. C. Whitty, Yardmaster, Talking to the Engineman in One of the Locomotives

The operating frequency is 38.6 megacycles, and the power rating of each set is 50 watts. The sets are designed for frequency modulation and have a nominal range of 20 miles which, if necessary, may be extended by means of repeater stations. The system was installed under the supervision of H. F. Finnemore, chief electrical engineer, Canadian National, with the cooperation of the Canadian Marconi Company.

Engineman Alfred Thomson Replies to a Call from the Yard Office

Railroads Contribute 4 Victory Loan Drive Trains

As part of the present Victory loan campaign, four trains, loaded with war exhibits, will be moved next month over 21 western railroads to approximately 100 mid-western and western cities in 16 states. The four units will also carry numerous exhibits of captured German and Japanese trophies, many of which have not as yet been publicly shown.

Through plans perfected by the 21 western railroads in co-operation with the U. S. Treasury, War and Navy departments, the exhibitions will be in charge of combat veterans who will travel with the trains and will demonstrate the use of the various types of equipment on display.

The western states which will be visited by the trains and their personnel are: Illinois, Missouri, Kansas, Colorado, Wyoming, Nebraska, Montana, Iowa, North and South Dakota, Minnesota, Wisconsin, Arkansas, Texas, Oklahoma and Louisiana. Six far western states will not be visited due to possible interference with trains carrying service men from Pacific ports to their homes.

Advance Commodore Crashes into Derailed Freight

More than 22 persons were injured at Lydick, Ind., eight miles west of South Bend, when the New York Central's "Advance Commodore," eastbound from Chicago on November 16, crashed into freight cars which had been derailed from a train on another track. A broken coupler on the freight train is said to have caused the derailment, and, although members of the crew immediately started flagging, the passenger train struck the freight cars before it could be stopped. Seven passenger

cars and also the locomotive left the rails.

While no official statement concerning the freight train derailment has been issued at this writing, witnesses reported seeing the freight break in two and the cars of the second half pile up together, pushing one of the cars into the path of the passenger train. Observers said that possibly the freight train picked up a plank at a crossing near Lydick which broke the coupler.

Freight Car Loading

Carloadings for the week ended November 17 had not been announced at the time this issue went to press.

Loading of revenue freight for the week ended November 10 totaled 838,218 cars, and the summary for that week as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading

For the Week Ended Saturday, November 10

District	1945	1944	1943
Eastern	157,222	155,714	162,033
Allegheny	179,120	182,810	182,514
Pocahontas	57,762	47,483	55,951
Southern	128,074	121,842	122,634
Northwestern	112,772	119,695	108,207
Central Western	137,971	135,778	138,402
Southwestern	66,797	76,682	78,201
Total Western Districts	316,040	332,155	324,810
Total All Roads	838,218	839,504	847,972
Commodities			
Grain and grain products	57,340	51,511	51,988
Live stock	25,942	27,447	26,175
Coal	183,684	155,504	167,393
Coke	12,542	13,846	14,207
Forest products	33,727	39,951	42,915
Ore	42,143	53,554	44,262
Merchandise l.c.l.	116,493	108,205	107,291
Miscellaneous	366,347	394,486	393,741
November 10	838,218	839,504	847,972
November 3	851,962	893,069	754,739
October 27	854,779	916,485	883,777
October 20	773,427	906,005	905,419
October 13	754,521	898,720	912,348
Cumulative Total, 45 Weeks	36,838,006	38,076,883	37,008,427

In Canada.—Carloadings for the week ended November 10 totaled 75,343, as compared with 77,004 for the previous week, and 75,037 for the corresponding period last year, according to the compilation of the Dominion Bureau of Statistics.

	Total Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
November 10, 1945	75,343	31,752
November 11, 1944	75,037	38,468
Cumulative Totals for Canada:		
November 10, 1945	3,144,841	1,578,831
November 11, 1944	3,182,392	1,730,328

American Locomotive Reviews Its War Role

The American Locomotive Company has published the story of its war-time job in a booklet entitled "American Locomotive Went to War." In the booklet, the company contrasts its 1939 dollar output of $22,358,700 and 1940 output of $38,438,900 with a production peak of $428,905,600 in 1943, which was an increase of more than 1800 per cent above the 1939 figure.

The company's published record shows that: 1.—Throughout the war, and long before it, it suffered no serious strikes of any kind; 2.—Throughout the war it never refused any assignment it was asked to undertake by any agency of the government if it had the facilities or man-power to do it—and it never failed to deliver what it undertook; 3.—The men and women of Alco produced more than a billion dollars of materials during the first four years of war, more than $864,000,000 for war; 4.—During the first four years of war the company thus produced more than it did during the first 25 years of the present century; 5.—American Locomotive did not capitalize on the war (its rate of war-time profit was 2.5 per cent); 6.—American Locomotive did its job using its own resources (to achieve an output of $1,156,000,000 in the wartime years the company never used government facilities in excess of $12,000,000); 7.—Often at considerable risk to itself, the company made ingenious use of its own facilities in order to save the government millions of dollars in new, costly and scarce equipment; and 8.—Because of its engineering and manufacturing skill American Locomotive was given the difficult emergency jobs to do—and did them.

The booklet also tells some of the stories of the achievements of the employees—stories of the production of tanks, tank killers, gun carriages, forgings, ships' masts, shells, springs for submarines and planes and tanks, gun tubes and locomotives.

September Ton-Miles

The volume of freight traffic handled by Class I roads in October amounted to 51,500,000,000 ton-miles, according to a preliminary estimate by the Association of American Railroads. The decrease under October, 1944, was 19.5 per cent.

Revenue ton-miles of service performed by Class I roads in the first ten months of 1945 was 5.5 per cent under 1944, and 3.5 per cent less than the corresponding period two years ago.

	1945	1944	Per cent decrease
First 8 months	482,468,182,000	495,561,822,000	2.6
September	[a]52,200,000,000	61,181,736,000	14.7
October	[b]51,500,000,000	63,875,263,000	19.4
Total 10 months	586,168,182,000	620,618,815,000	5.6

[a] Revised estimate.
[b] Preliminiary estimate

The accompanying table summarizes revenue ton-miles for the first ten months of 1945 and 1944.

Two Railroads Favor Coast-to-Coast Passenger Trains

The Chesapeake & Ohio and Nickel Plate in a joint advertisement appearing last week in a number of newspapers asked the question: "Why shouldn't America have through sleeping car service from coast to coast?"

Setting forth the added convenience of such service to the traveling public, the two railroads assert that the physical and other problems which would have to be solved to provide this service are possible of solution, and they make the following concrete proposal:

"Chesapeake & Ohio, whose western passenger terminus is Cincinnati, stands ready now to join with any combination of other railroads to set up through sleeping car service from coast to coast on practical schedules and routes.

"The Nickel Plate Road, which runs to Chicago and St. Louis, also stands ready now to join with any combination of roads to set up the same kind of through transcontinental sleeping car service."

Continuing, the roads' statement concludes: "Through sleeping car service is bound to come. Because it is so much in the public's interest, it is also in the interest of all railroad people and all railroad investors. We invite their support—and the support of all who travel—for this badly needed improvement in rail transportation."

N. Y. Railroad Club Announces Annual Yule Dinner

The annual Christmas season dinner to be held by the New York Railroad Club at 7 p. m., December 6, at Hotels Biltmore and Commodore, has been announced as a "Salute to the Railroads" for their war-time service. A tribute as well to the entire railroad supply industry, the occasion marks also the 73rd anniversary of the New York club.

Rock Island Opens New "Rocket" Fast Freight Service

The Chicago, Rock Island & Pacific has placed in operation the first of a proposed fleet of high-speed "Rocket" freight trains between Chicago and Houston, Tex. The trains are powered by 4,050-hp. Diesel-electric locomotives which were especially designed and constructed for this type of service. Leaving Chicago at 11:00 p. m., the southbound Rocket freight arrives in Kansas City, Mo., at 7:00 p. m. the next evening; Ft. Worth at 9:00 p. m. the following day; and Houston at 3:30 p. m., the next afternoon, making the run of 1,385 miles in 64 hr. 30 min. The northbound Rocket freight leaves Houston at 2:30 a. m., arriving at Ft. Worth at 8:08 p. m., of the same day; Kansas City at 8:30 p. m., the next day; Rock Island, Ill., at 4:30 p. m., and Chicago at 11:50 p. m., of the following day. To expedite service these trains will be equipped with front-to-rear radio communication.

The new high speed freight schedules are possible, the road's officers explained, because millions of dollars were spent by the Rock Island during the past few years for new power and equipment and for right-of-way improvements, including the relocation of segments of the line to reduce grades and curves, new and stronger bridges, additional passing tracks, and centralized traffic control.

Chicago to Sue Three Roads on Smoke-Violation Charges

Approximately 25 suits charging three major railroads with violating the city's smoke-abatement regulations will be filed this week by the City of Chicago against the Chicago & North Western, the Pennsylvania and the Chicago, Milwaukee, St. Paul & Pacific. Decision to file the suits came after a municipal chief deputy smoke inspector told the city council committee on health that the three railroads had promised to use more Diesel-electric switch engines

Selected Income and Balance-Sheet Items of Class I Steam Railways

Compiled from 132 reports (Form IBS) representing 136 steam railways
(Switching and Terminal Companies Not Included)

Income Items	All Class I Railways — For the month of August 1945	For the month of August 1944	For the eight months of 1945	For the eight months of 1944
1. Net railway operating income	$86,683,863	$101,485,624	$722,678,817	$753,656,409
2. Other income	13,413,606	14,116,966	121,621,732	119,773,581
3. Total income	100,097,469	115,602,590	844,300,549	873,429,990
4. Miscellaneous deductions from income	2,387,473	2,633,468	20,365,199	27,572,544
5. Income available for fixed charges	97,709,996	112,969,122	823,935,350	845,857,446
6. Fixed charges:				
Rent for leased roads and equipment	12,164,456	15,619,356	98,931,921	103,747,623
Interest deductions[1]	31,484,760	34,010,424	257,653,812	275,957,138
Other deductions	113,177	135,941	893,082	1,039,508
Total fixed charges	43,762,393	49,765,721	357,478,815	380,744,269
7. Income after fixed charges	53,947,603	63,203,401	466,456,535	465,113,177
8. Contingent charges	2,795,872	2,802,715	22,523,947	22,614,562
9. Net income	51,151,731	60,400,686	443,932,588	442,498,615
10. Depreciation (Way and structures and Equipment)	28,037,021	26,874,037	221,659,368	213,007,242
11. Amortization of defense projects	20,065,938	16,177,183	158,090,240	120,969,795
12. Federal income taxes	60,699,709	132,016,885	746,458;989	898,119,658
13. Dividend appropriations:				
On common stock	16,224,948	15,281,758	98,809,603	90,488,633
On preferred stock	4,145,891	17,863,796	26,682,357	33,648,192
Ratio of income to fixed charges	2.23	2.27	2.30	2.22

Selected Asset and Liability Items	All Class I Railways — Balance at end of August 1945	Balance at end of August 1944
17. Expenditures (gross) for additions and betterments—Road	$142,573,507	.....
18. Expenditures (gross) for additions and betterments—Equipment	183,413,221	.....
19. Investments in stocks, bonds, etc., other than those of affiliated companies (Total, Account 707)	553,649,351	$588,644,481
20. Other unadjusted debits	488,045,588	432,259,555
21. Cash	1,246,573,466	1,210,566,756
22. Temporary cash investments	1,915,992,488	1,868,120,161
23. Special deposits	173,312,831	154,071,176
24. Loans and bills receivable	419,277	329,431
25. Traffic and car-service balances—Dr.	44,411,944	45,826,457
26. Net balance receivable from agents and conductors	125,514,272	147,310,940
27. Miscellaneous accounts receivable	641,321,109	629,952,724
28. Materials and supplies	605,103,191	598,987,486
29. Interest and dividends receivable	37,685,503	28,443,589
30. Rents receivable	3,498,521	1,882,318
31. Other current assets	54,326,678	65,777,495
32. Total current assets (items 21 to 31)	4,848,159,280	4,751,268,533
40. Funded debt maturing within 6 months[2]	167,032,161	227,142,170
41. Loans and bills payable	5,389,759	12,263,386
42. Traffic and car-service balances—Cr.	200,385,117	204,142,005
43. Audited accounts and wages payable	473,319,491	475,886,619
44. Miscellaneous accounts payable	202,738,241	138,007,875
45. Interest matured unpaid	44,627,686	39,780,870
46. Dividends matured unpaid	7,617,166	20,936,153
47. Unmatured interest accrued	66,454,151	69,885,865
48. Unmatured dividends declared	27,274,664	21,200,397
49. Unmatured rents accrued	25,802,631	24,575,944
50. Taxes accrued	1,734,883,179	1,950,695,496
51. Other current liabilities	134,776,522	95,312,849
52. Total current liabilities (items 41 to 51)	2,923,268,643	3,052,687,459
53. Analysis of taxes accrued:		
U. S. Government taxes	1,556,969,625	1,777,722,233
Other than U. S. Government taxes	177,913,554	172,973,263
54. Other unadjusted credits	720,407,439	477,996,669

[1] Represents accruals, including the amount in default.
[2] Includes payments of principal of long-term debt (other than long-term debt in default) which will become due within six months after close of month of report.

Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.

in the sector in which are maintained terminal yards and enginehouse facilities but had failed to do so.

According to municipal attorneys more than 1,000 complaints had been received by the city from persons in the area in question. The complainants, it was shown, were headed by a pastor of a church in the neighborhood and, following his testimony, the filing of the complaints was ordered.

Urges Adequate User Tolls for Waterways

(Continued from page 868)

additional facilities are required by public convenience and necessity."

Rate-Making—On the matter of rates, the position of the Chicago group is that they should "be based upon the circumstances and conditions surrounding the operations of each type of carrier" and that "close observance to the cost of transportation must be the primary factor in determining the measure of the rate if the public is to enjoy the inherent advantages and economies of each mode of transportation.

"So-called 'scientific' rate structures based upon mathematical formulae," it says, "are neither desirable nor practical. Furthermore, transportation should not be regarded or treated as a means for social or economic experiments. Basically it must always be borne in mind that carriers are here to serve the public and that their services and charges should be made to fit the needs of industry. Rates must be so made that the commerce of the country will move freely."

The Chicagoans would also like to see all agencies of transportation regulated by one federal agency viz., the I. C. C., and believes that the $12,000 salary of commissioners should be "substantially increased." Passage of the Bulwinkle bill to exempt common carriers from the anti-trust statutes (with amendments suggested by the N. I. T. League) is favored. Voluntary consolidations of railroads are approved, as is also the provision of all types of transportation by a single company.

Union League Position—The Union League Club of Chicago in a communication to Chairman Lea, dated November 13, has likewise made recommendations on national transportation policy in which it favors the enactment of the Bulwinkle bill and the measure repealing land-grant rates. It also approves the "integration" of various types of transportation under common ownership, subject to I. C. C. scrutiny. It suggests that "the internal revenue laws be amended so that money for deferred transportation operating expenses . . . will not be subject to income tax." It wants the government to retire from the operation of barges on the inland waterways. On the subject of federal aid to transportation, the Union League has this to say:

"We oppose irrecoverable government subsidies to transportation. We endorse the principle that users of waterways and waterway facilities, created, improved and maintained by public funds for navigation purposes, also that the users of public facilities for landing fields, etc., in connection with airways, should pay reasonable user charges, determined by appropriate authority, and reflecting the extent and character of the use made and benefits derived."

B. & B. Supply Association Elects Officers

At a meeting of the Executive committee of the Bridge and Building Supply Men's Association held in Chicago on November 12, the following officers were elected for the ensuing year: president, G. B. Coffey, A. M. Byers Co., Chicago; vice-president, W. Lyle McDaniel, Massey Concrete Products Company, Chicago; secretary, E. C. Gunther, Duff-Norton Mfg. Co., Chicago; treasurer, G. R. Betts, Armco Drainage & Metal Products, Inc., Chicago; directors—(term expiring 1946), E. C. Gunther and G. B. Coffey; (term expiring 1947), G. W. Morrow, Construction Equipment Department, Worthington Pump & Machinery Corp., Chicago; and S. W. Hickey, *Railway Age*, Chicago; (term expiring 1948), Howard Mull, Warren Tool Corporation, Chicago; and C. E. Croisant, Lehon Company, Chicago.

Following the election of officers, discussion was carried on looking to the possibility of a joint exhibit of the association with the Track Supply Association in conjunction with the annual meetings of the American Railway Bridge and Building Association and the Roadmasters' and Maintenance of Way Association, to be held in Chicago September 17-19, 1946.

R. R. C. Distribution

E. G. Buckland, president of the Railroad Credit Corporation, announced this week that the corporation will make a liquidating distribution on December 15 of one-half of 1 per cent of its fund as of No-

vember 30, amounting to $362,134.18. Of this amount, $347,650.10 will be paid in cash and $14,484.08 will be credited on carriers' indebtedness to the corporation.

This will bring the total amount distributed to $70,082,386.25 or 95.5 per cent of the original fund contributed by the carriers participating in the Marshalling and Distribution Plan, 1931. Of this total, $41,342,696.99 will have been paid in cash and $28,739,689.26 in credits.

Pelley Nails a Canard

The accusation that the railroads are supporting a program of "integration" of transportation, to establish railroads as "regional monopolies," has been passed about freely in recent years—by government officials of the Henry Wallace stripe and by "specialty shop" transportation protagonists, who wish to preserve their "specialty shop" monopoly (especially in air transport) against "department store" competition.

J. J. Pelley, president of the Association of American Railroads, recently noted a newspaper report to the effect that an airline official had repeated this inaccurate representation of the railroads' position—and he sent the following telegram to the airline executive (C. R. Smith of American Airlines) reported as having reiterated this accusation.

"In today's paper," Mr. Pelley's telegram reads, "you are quoted as stating that railroads seek to 'shackle aviation with restrictive legislation.' On the contrary, the railroads believe in aviation and believe further that present restrictions which arbitrarily bar them from opportunity to participate in its greater development and usefulness should be removed and that railroads should be allowed the same opportunities in this field as other citizens, all subject to proper public regulation. The railroads believe also that commercial air transport should pay its own way, just as railroads do, but this certainly would not be restrictive legislation.

"You are further quoted as saying that an objective of the railroads is to set up sectional monopolies of all forms of transport under railroad control. The railroads have no such objective, sectional or otherwise, and are offering no proposals looking to that end. Since the statements attributed to you were made before the convention of the American Petroleum Institute, I am sending a copy of this message to that organization also, with the request that it be presented to their meeting."

Electric Traction Hauled Swiss War Traffic

A long-range electrification policy, which had its practical inception during the first World War, when a coal shortage proved Switzerland's dependency on the importation of foreign fuel, proved of immeasurable value to the Swiss and prevented what might well have amounted to a "traffic catastrophe" during World War II, according to the Official Information Bureau of Switzerland, in New York. In a nation lacking both motor fuel and tires, in World War II, this bureau explained, transportation would have been virtually at a standstill had not the railways assumed tremendously increased freight and passenger traffic.

Evidence of this increase are the figures for passengers carried in 1943—177 million—as compared with a pre-war year's 113 million. Passenger-miles rose from 1,775 million before the war to 2,930 million in 1943. Freight traffic totaled 2,180 million ton-miles in 1943 as compared to 985 million ton-miles in 1938.

Almost 99 per cent of Swiss traffic today is handled by electric traction, the bureau said further, and of the 3,610 miles of railway in Switzerland 88.6 per cent are electrified.

The first electric railway in Switzerland was the 1,312-ft. cogwheel trolley line connecting the hotel district of Montreux harbor, Lake of Geneva, with the city quarter of Planches. This line, which was inaugurated October, 1887, has long been abandoned. On April 16, 1888, double-decker electric street cars made their debut.

The third electric railway in Switzerland was the narrow gage line Sissach-Gelterkinden in the Basel-Land district. Insufficient water power made some steam operation necessary. This line was dismantled in 1916 when the Swiss Federal Railroads replaced it with a line through the Hauenstein tunnel.

These pioneer electric lines used direct current. By the end of the 'Nineties, electric street, cross-country and mountain railways were numerous. The line from Burgdorf to Thun became the first standard electric railway in Switzerland, but the Stansstad-Engelberg railway and the cogwheel lines from Zermatt to the Gornergrat and up to the Jungfrau should also be mentioned. In 1906 the Simplon railway was inaugurated as an International Express line. The experimental stretch Seebach-Wettingen of the Swiss Federal Railroads, using alternating current, was installed in 1904, at its own risk, by the Machinery Factory Oerlikon. Both of the first two alternating-current locomotives are still in service today, with their original motors. One functions as a switcher on the Bodensee-Toggenburg railway, and the other is doing duty on the Bernese Sensetal railway.

Direct-current traction was later also used on long inter-regional lines, such as the Montreux-Bernese Oberland and the Bernina railways. Alternating current traction came into its own in 1913 with the opening of the electric Lotschberg railway. This marked the beginning of an extensive electrification of the Swiss railway system.

It is expected that the few privately operated lines in Switzerland still using steam locomotives will soon also be electrified.

Club Meeting

The Indianapolis Car Inspection Association will hold its 1946 election of officers at 7 p. m., December 3, in Room 403, Union Station, Indianapolis, Ind.

Retired Conductor Reaches 104th Birthday

Daniel A. Wedge, retired train conductor of the Chicago, Burlington & Quincy, and probably one of the oldest railroad employees in the country, celebrated his 104th birthday at his home in Aurora, Ill., on October 26. Mr. Wedge was born in Ohio in 1841, and made several trips on the Burlington before enlisting in the Union Army during the Civil War.

As part of the birthday celebration J. L. Mulroy, superintendent of the Burlington's Aurora-La Crosse division, and W. P. Mathews, veteran conductor of the Aurora division, presented Mr. Wedge with 104 silver dollars as a gift from the road.

Although confined to his bed for several years because of a hip injury, Mr. Wedge remains mentally alert and takes a deep interest in current affairs. He is commander and last surviving veteran of Army Post of the Grand Army of the Republic.

Retired Conductor Reaches 104th Birthday

Daniel A. Wedge, one-time Burlington conductor, is visited by some of his former co-workers who helped him celebrate his 104th birthday at his home. The visitors included division superintendent J. L. Mulroy, and W. P. Mathews, a veteran conductor who once served as brakeman under Mr. Wedge.

With the Government Agencies

Bulwinkle Bill Wins Committee Approval

Modified version with N.I.T.L. amendments is reported favorably to the house

The committee on interstate and foreign commerce last week reported favorably to the House a modified version of the Bulwinkle bill to stay operation of the anti-trust laws with respect to carrier rate-making procedures and other joint actions approved by the Interstate Commerce Commission. The bill is H.R. 2536 sponsored by Representative Bulwinkle, Democrat, of North Carolina.

The Committee substitute is a complete rewrite of the original version, but, as the committee report explains, it retains the substance of the original provisions with clarifying language and amendments, principally those suggested by the National Industrial Traffic League. There are three of these so-called N.I.T. League amendments, the first of which restricts the authorized rate conferences and joint actions to carriers of one type, except as to matters of joint rates or through routes over different types of carriers. The second strengthens that language in the bill which provides that joint-action procedures shall not prevent any carrier from taking independent action; and the third adds provisions giving any person the right to complain of any action taken pursuant to an agreement approved by the commission—whereupon the commission (which could also act upon its own motion without complaint) would determine whether its approval of the agreement should be modified or terminated.

Contract Carriers Excluded—The original version's provisions limiting application of the bill to common carriers and freight forwarders subject to the Interstate Commerce Act are retained; and contract carriers may not, therefore, be parties to agreements submitted to or approved by the I. C. C. Among other suggested changes, the commission had asked that the bill's scope be extended to embrace contract carriers.

The committee's favorable report noted how the recent hearings developed the fact that the bill "has virtually the unanimous support of all interests directly interested in transportation, including government authorities, both federal and state, carriers of all kinds, shippers throughout the country, railroad labor and agricultural and livestock interests." Mention was made of the letter wherein the Attorney General made "certain suggestions and criticisms," one of which "has been met by an amendment." Also, the report calls attention to the opposition expressed by Governor Arnall of Georgia in a telegram, noting at the same time, however, that the governor found it inconvenient to appear at the hearings.

The discussion of the "need for the proposed legislation" pointed out that the carrier associations for years "operated openly with the full knowledge" of the I.C.C. and state regulatory agencies; and that they remained unchalleneged until a few years ago when "certain officials of the Department of Justice" began to make speeches questioning their legality. That department next took steps toward securing indictments late in 1942, when, as the report put it, "the country was in the midst of the war and dependent to a great extent upon its transportation system for the successful prosecution thereof."

Continuing, the report further recalls that the Department of Justice's efforts were "temporarily stayed" when the chairman of the War Production Board on March 20, 1943, issued certificate 44 granting the carriers immunity for the war period. Nevertheless, the Department of Justice carried on and brought its pending civil suit against the railroads. Likewise, it is noted, has the legality of rate-making procedures been challenged by the suit brought recently by the state of Georgia in the Supreme Court.

Calls for Prompt Action—Because these developments have caused "grave concern among all those having a direct interest in transportation," the committee appraises the present situation as one which "clearly calls for prompt action by Congress." The public interest, it says, "will not be served if there is permitted to continue the recently created state of uncertainty as to the extent to which carriers may engage in joint activity without risk of violating the antitrust laws."

The report goes on to state the problem as one of reconciling and harmonizing the principles of public policy embodied in the antitrust laws and the Interstate Commerce Act. "The only practical approach," it adds, "is to grant to a competent administrative agency, as proposed in the bill, the authority to resolve the conflict in specific instances of proposed joint action by carriers." A number of precedents are cited for legislation of the character proposed, and various authorities are quoted on the necessity for joint action by carriers. In the latter connection considerable attention is given to the need for joint action in rate matters.

The remainder of the report includes a detailed explanation of the bill, which would add to the Interstate Commerce Act a new section (5a) containing nine paragraphs. Generally all types of carrier agreements and joint actions are covered except those relating to matters already governed by section (5), i. e., pooling, divisions, consolidations, mergers, purchases, leases, acquisitions, etc.

Troop Movement at Peak in December

Long trips in coaches result of strikes delaying new cars, Army explains

Record after record in the movement of troops has been broken, and new ones are continuously being set up, the War Department pointed out this week in a statement based on the latest report on troop returns by Maj. Gen. Charles P. Gross, chief of transportation. The volume of arrivals in this country at present is more than double the record number of troop embarkations during the war. December will be the peak month, according to the Army's schedule, with 423,000 men arriving at East coast ports and 306,000 at Pacific coast ports, a total of nearly 730,000. In November, 697,000 are expected to land, as compared to 578,000 in October. Returns in January, 1946, are scheduled at about 548,000, of which 223,000 will arrive at West coast ports.

The War Department expects that about 1,130,000 troops will travel in organized rail movements in November and a similar number in December. This figure includes Army personnel only, and does not cover men in the Navy, Marine Corps or Coast Guard, whose demobilization programs also are proceeding at an accelerated rate. Likewise, the movement of "hundreds of thousands" of troops in small units or as individuals is not accounted for nor is the travel home from discharge centers of those men who travel by rail as civilians.

To Hit Civilians Harder—The full transportation resources of the United States are being exploited "to the maximum short of colossal waste" to move returning service men at this rate, the statement pointed out, a rate that is "straining the rail capacity" of the country. As a result, still further inroads on accommodations for civilian travel must be made, it was indicated, and troops will be moved in coaches on trips well over 48 hrs. in duration, and even across the continent.

"Western railroads particularly are hard pressed to absorb the tremendous load beginning to arrive from the Pacific," the War Department explained. "Because of the greater population density in the East, a far greater proportion of troops arriving on the West coast requires sleeping accommodations for long trips. In October, 82 per cent of the troops debarking at West coast ports were entitled to sleeping car space, while only 34.5 per cent of those arriving at East coast ports were eligible for such accommodations. Last month, the movement of 42,181 troops was delayed for a period of

24 hrs. or more because of the lack of sleeper equipment for long journeys.

"Because congestion in ports and nearby disposition centers would interfere with the flow of returns, troops again are moving long distances in day coaches, some of which," according to the statement, "are woefully antiquated and none of which is conducive to comfort on a long journey. During the past month," it continued, "there was a perceptible increase in the number of troops moved in coaches on trips of more than 48 hrs., and in troops moved part way in coaches on trips of more than 48 hrs."

Effect of Strikes—Lack of sufficient sleeping car accommodations for these troops is ascribed by the War Department statement in part to the strike in the Simmons Company plant at Kenosha, Wis., where the manufacture of "berthing facilities" for troop sleepers has been tied up since September 22. There are more than 300 new troop sleepers otherwise completed and ready for service, it was pointed out, and delivery before the end of the year of the 1,200 cars of this type on order is being held up indefinitely by this strike. Production of the cars has been delayed, too, by intermittent strikes at the plants of the builder, the Pullman-Standard Car Manufacturing Company, and in some of its subcontracting plants. Likewise, the department statement went on to say, the delivery of 400 troop kitchen cars has been delayed approximately a month by a series of strikes in the Berwick, Pa., plant of the American Car & Foundry Company. Where 230 of these cars were scheduled to be ready by the end of October, only 10 actually were finished at that time.

Air Lines Ordered to Share Eastbound Troop Load

Air lines operating from the West coast will be required to allot 70 per cent of their passenger space to Army and Navy personnel returning from the Pacific, effective December 3, under the provisions of General Order 58 of the Office of Defense Transportation, issued November 20.

On the basis of present air line schedules, it is estimated that about 800 service men daily can be moved east under this order. The operators agreed to take over a share of the troop movement, the O.D.T. said, because of the scarcity of Pullman cars and the delay in production of additional troop sleepers resulting from strikes.

The order requires air lines operating out of Seattle, Wash., San Francisco, Cal., Los Angeles and San Diego to make available daily to the armed forces not less than 70 per cent of space allocated from those points for eastbound passenger travel. This space is to be used at the discretion of the military authorities for the transportation of organized movements of service personnel being returned from the Pacific and destined to Boston, Mass., New York, Baltimore, Md., Washington, D. C., Norfolk, Va., or Jacksonville, Fla.

While the Army already has assigned 36 hospital cars to the movement of ablebodied returning troops in an effort to alleviate the shortage of sleeping car equipment, and expects to increase that number as the need for them for the movement of sick and injured men decreases further, the rate at which men are returning from overseas continues to exceed the available berth space. The War Department therefore recently asked the Office of Defense Transportation to withdraw additional Pullman cars from regular "civilian" service, it was pointed out, proposing that such cars should not be operated in runs of 500 miles or less, instead of the present 450 mile minimum.

The War Department statement did not indicate what disposition the O.D.T. made of this request, but it is understood that, after consideration, it was rejected. Studies are under way at the O.D.T. to develop ways of using the available sleeping cars with greater efficiency, it is indicated. In advocating the higher limit on Pullman car runs, the Army estimated, it is said, that about 350 additional sleeping cars would thus have been withdrawn from the small number remaining available for use in scheduled trains.

Transport Agencies Remain Exempt from Revamp Bill

Additional exemption provisions covering the civil functions of the War Department's corps of engineers were inserted by the Senate as it passed its version of the House-approved government agency reorganization bill this week. Meanwhile, the Senate left undisturbed those House-approved exemptions which eliminate the Interstate Commerce Commission, National Mediation Board, National Railroad Adjustment Board, and Railroad Retirement Board.

The bill, H. R. 4129, passed the House on October 4, and the differing versions now go to conference. Sponsored by Representative Manasco, Democrat of Alabama, the proposed legislation would be a partial response to President Truman's recent request for authority to reorganize federal agencies.

Propose Senate Probe of Rail Reorganization Delays

Investigation by the Senate interstate commerce committee of conditions surrounding the operation and handling of insolvent railroads by trustees and receivers is proposed in Senate Resolution 192 which was introduced last week by Senator Wheeler, Democrat of Montana, for himself and Senator Reed, Republican of Kansas. As noted in the *Railway Age* of November 3, page 729, Senator Wheeler, who is chairman of the interstate commerce committee, suggested the need for such an investigation (and Senator Reed agreed with him) in the course of a recent hearing on proposed legislation to afford a means of relief short of reorganization for railroads unable to meet maturities or interest charges.

Under the resolution the committee or any subcommittee thereof would be authorized and directed to inquire into the causes for the "long drawn-out period of insolvency," the fees paid trustees, receivers, counsel, bankers, or bank syndicates, and "all matters relating thereto." The "whereases" leading up to this direction set forth that as of June 30 some 76 railroads with an aggregate mileage of 50,000 and total investments exceeding $4,000,000,000 were in the hands of receivers or trustees.

Also, that some of these roads entered bankruptcy more than 12 years ago; and that court proceedings involving some "very important" roads "are in such condition that it is difficult if not impossible to approximate the time when reorganization will be completed and normal operation of the roads resumed." Finally, it is asserted that the continued holding of these roads in trusteeship or receivership is contrary to the public interest since their earnings in recent years "have been sufficient to accumulate large cash amounts" and have placed them "in an apparently solvent position."

Contracts Between Forwarders

The Interstate Commerce Commission has postponed from November 19 until December 20 the effective date of its recent order requiring that contracts or agreements between freight forwarders for joint loading and for terminal services and facilities must be in writing, and that each forwarder which is a party to such contract or agreement must file a verified copy with the commission. The original order was noted in the *Railway Age* of September 29, page 536.

I. C. C. Service Order

Restrictions on holding for orders carload shipments of grain or seeds at Glenwood, Minn., St. Cloud, Staples, Thief River Falls or Willmar, effective under Interstate Commerce Commission Service Order No. 160, have been suspended from November 16 through December 14 by No. 160-F.

New Land-Grant Compromise Approved by Senate

The Senate on November 20 adopted the new conference report on the differing Senate and House versions of the Boren bill to repeal remaining provisions of the land-grant-rate law. The report on which the conference committee agreed the previous day eliminates from the bill the so-called "veterans' farms fund" provision. As noted in the *Railway Age* of November 3, page 726, this extraneous provision, inserted by the Senate when it passed the bill, caused the first conference report to be rejected by the House. The new conference report, which must now be considered by the House, made no other changes, so October 1, 1946, remains as the effective date of repeal.

Explosives Regulation Penalty

According to a notice issued by Secretary W. P. Bartel, the Interstate Commerce Commission has been advised that a fine of $1,000 has been imposed on the Chicago, Rock Island & Pacific following a plea of guilty to an information in 13 counts which charged violations of section 235 of the criminal code, growing out of infractions of the commission's regulations for the transportation of explosives and other dangerous articles.

The investigation was made by the com-

mission's Bureau of Service and the case was prepared for court by the Bureau of Inquiry. The specific offenses named in the information were the cutting off, from other cars, of cars placarded "explosives" while the cars were in motion; the movement of cars containing explosives when coupled directly to an engine; and the placing in through freight trains of cars placarded "explosives" at positions nearer than 11 cars from the caboose and nearer than 16 cars from the engine.

Lifts Maximum Rate Basis on New Automobiles

Reporting on reconsideration of the No. 28190 proceeding, the Interstate Commerce Commission has increased from 75 per cent to 85 per cent of first class the maximum reasonable basis of rates prescribed for carload shipments of new automobiles throughout the country. Also a basic carload minimum weight of 10,000 lb. is prescribed instead of the 12,000 lb. previously ordered.

This case is the general proceeding involving rates and practices applying to the transportation of new automobiles by rail or highway, or by either in conjunction with water carriage. The original report was reviewed in the *Railway Age* of March 3, page 426. The report on reconsideration was written by Commissioner Miller, while separate expressions came from Commissioner Mahaffie, dissenting in part, and from Commissioner Patterson, dissenting. Commissioner Aitchison's concurrence in the result of the majority report is noted.

The reconsideration, limited to the finding prescribing the maximum reasonable basis, came as a result of petitions filed by the railroads with certain exceptions. After reviewing the evidence, the majority said it appeared "doubtful whether the benefits accruing to the rail carriers in the form of increased traffic would be sufficient to make up for the substantial reductions in the long-haul rates that would be required under the findings in the prior report."

Commissioner Mahaffie did not agree to the increase in the rate level to 85 per cent of first class. He indicated his suspicion that the prescribed basis might become pretty much of a "paper rate" proposition useful principally as an automobile pricing device.

"The going rates upon which automobiles have moved by rail in recent years are, in most instances, substantially below the 85 per cent level," he said. "The going basis from assembly points is generally even lower than from manufacturing points. These lower rate levels were established voluntarily by the carriers and in the aggregate afford a convincing measure of the reasonable maximum rates both from the assembly points and manufacturing points. This commission is never warranted in prescribing an unreasonably high basis of rates from manufacturing points even if the industry, for its own reasons, is agreeable to such a basis. This is especially true when that basis appears to be used as a means of fixing a fictitious price to be paid to the manufacturers and dealers by the purchasers and is not of economic value to the carriers."

Meanwhile, Mr. Mahaffie agreed that the minimum weight should be reduced, but he thought the majority's cut to 10,000 lb. went too far. He suggested that loading of automobiles in the past justified an 11,000-lb. basic minimum, subject to "somewhat higher gradation for larger cars."

Dissenter Patterson subscribed to Mr. Mahaffie's views, but went on to note that the question of whether certain of the rates originally in issue (some of them as low as 30 per cent of first class) are less than the minimum of reasonableness was excluded from the reconsideration of the case. On that matter Mr. Patterson adheres to his original concurring-in-part expression which suggested that a minimum reasonable basis might also have been prescribed at not less than 50 per cent of first class.

Representation of Employees

The Switchmen's Union of North America has supplanted the Brotherhood of Railroad Trainmen as the Railway Labor Act representative of Great Northern yardmen (foremen, helpers and switchtenders), according to results of a recent election which has been certified by the National Mediation Board. The vote was 628 to 565.

Machinists and carmen employed by the Tennessee have chosen, respectively, the International Association of Machinists and the Brotherhood of Railway Carmen of America—both operating through the Railway Employees Department, American Federation of Labor.

I. C. C. Again Urges Installing "Adequate Block System"

A recommendation that the Chicago, St. Paul, Minneapolis & Omaha install in the territory involved "an adequate block system" was incorporated in the Interstate Commerce Commission report of its investigation, conducted under the supervision of Commissioner Patterson, of a head-on collision between two passenger trains at Worthington, Minn., at 5:50 a. m. on September 27. The immediate cause of the accident, according to this report, was failure to obey a meet order. There were no fatalities, but 7 passengers and 8 employees were injured.

In the vicinity of Worthington, which is about 176 miles west (by time-table direction) of St. Paul on the main line to Council Bluffs, Iowa, the line is level, tangent, single track where trains are operated by timetable and train orders, there being no block system in use. In the 30 days preceding the accident, the average daily movement was 21.23 trains.

At a point 1,122 ft. west of the station at Worthington a facing point switch (for westbound movements) connects the main line to a parallel track on the north. A train order, held by both trains involved in the accident, required the inferior westbound train, No. 209, to clear the main track by heading into this parallel track after it had completed station work at Worthington. When No. 209 arrived at the station, the first of its two locomotives was detached and moved through the switch to the parallel track, where it came to a stop about 790 ft. west of the switch. The switch was left lined for movement from the main track into the parallel track.

As the eastbound train, No. 202, approached Worthington it was moving about 60 m.p.h. There was a dense fog in the vicinity, and the engineer experienced difficulty in detecting landmarks. At a point about 1½ miles west of the station he sounded the meeting point whistle and made a service brake-pipe reduction which so reduced the speed that at a point about 600 ft. west of the switch it was about 15 m.p.h. The engineer then made an additional brake-pipe reduction, but apparently immediately afterwards inadvertently moved the valve to holding position, in which the train brake system would be recharged and the brakes released. The eastbound train had run through the switch when the engineer saw the reflection of the headlight of No. 209's engine a short distance ahead. He then applied the brakes in emergency, and his train's speed was reduced to about 5 m.p.h. when it collided with the opposing standing train. None of the equipment was derailed.

Other members of the crew of No. 202, which also had two locomotives, saw the reflection of the headlight of the first engine of No. 209, which was standing on the parallel track west of the switch, and thought the westbound train was in the clear on that track. Under the rules, No. 202 was required to wait west of the clearance point of the switch unless No. 209 had cleared the main track, but, according to the commission's report, members of the train crew of the eastbound train "took no action to ascertain if the train to be met was into clear" on the parallel track.

Even though the engineer of No. 202 thought he was properly controlling the speed of his train, and was not aware that he had passed the switch until he saw the headlight close ahead, according to the commission's report, it went on to say that, "if an adequate block system had been in use, the crew of No. 202 would have received definite information that their train was required to stop short of the clearance point, and this accident could have been prevented."

Would Hold Roads Responsible for Drinking on Trains

Representative Russell, Democrat of Texas, has introduced H. R. 4745 "to make railroad companies responsible in damages to passengers for injuries suffered by reason of drinking conditions on trains." Under the bill, an injured party could bring action to recover damages in the United States district court for the district in which he resides or through which the line of the railroad runs.

House Transport Survey

"Tremendous public interest in national transportation problems" is indicated by the "mass of material" which the House committee on interstate and foreign commerce has received in response to the list of suggested topics sent out recently as a preliminary to its "Post-war Transportation Survey." That is Committee Chairman Lea's reaction as reported in a November 15 statement.

The statement said that the committee is now engaged in digesting and analyzing the material. It also advised interested parties that November 15, the date by which the committee had requested that all statements be filed, was not to be considered as a dead-

line. Thus Mr. Lea urged all those who have not already sent in their comments to do so as soon as they find it convenient.

"The analysis of the material being received by the committee," the statement continued, "will carry this preliminary work well into the New Year, giving those who have not replied time to make their views available to Congress. The splendid cooperation received by the committee reflects a sincere and commendable desire on the part of users of transportation, transport agencies, investors and economists, to aid the Congress in reaching constructive and significant solutions of the nation's many complicated and difficult transportation problems.

"We wish the public to understand that our committee will devote all the time necessary for a thorough and helpful revision of our transportation statutes. It is our desire to give all who can make contributions to this survey full opportunity to do so."

The list of suggested topics sent out by the committee was published in the *Railway Age* of August 4, page 223. While this preliminary work is going on, House Resolution 318, under which the committee would be authorized and directed to make the study, remains pending before the House rules committee where it was referred after its introduction by Mr. Lea last July. There have been recent reports to the effect that some members of the rules committee have taken the position that the broad scope of the resolution might give the interstate commerce committee jurisdiction overlapping that of other committees.

The interstate commerce committee could, of course, proceed with a transport study without the specific direction from the House which the resolution calls for; but it would have to obtain House approval for the incurring of any special expenses involved.

Will Public Pay for Air Shipment of Perishables?

Extensive air transportation of fresh fruits and vegetables awaits the further development of air freight services, the Bureau of Agricultural Economics of the Department of Agriculture comments in the "1946 Outlook Issue" of its periodical review entitled "The Marketing and Transportation Situation." Moreover, it adds, improvements in railroad refrigerator car and truck service may serve to curtail the volume of fresh fruits and vegetables to be moved by air.

Fruit and vegetable shippers and receivers are not interested in the small loads that can be carried in the cargo compartments of passenger planes, except for experimental purposes, the bureau observes, and it adds that, while it is too early to make a flat prediction, substantial volume movements of fresh produce by air probably will be achieved only at rates approaching 5 cents per ton mile. While such rates are higher than rail freight or express, they are offset, it points out, in part by the fact that perishables shipped by air "are likely" to reach the market in sufficiently better condition to command premium prices that will absorb the higher freight costs.

Recent experiments indicate that there is a market willing to pay a "reasonable" premium price for superior qualities of perishables if they can be delivered by air, according to this review. "Most of these experiments were not carried on long enough, however," it adds, "to indicate how much repeat business was available and how much was mere novelty impulse buying. The most encouraging experiment was that at Detroit, where air-borne lettuce sold at 5 cents a head premium, solely on its appearance and quality, without being identified to the consumer as air-transported. In most of the experiments, the produce was placed in special consumer packages as well as being marked and trimmed. In these cases it is somewhat difficult to estimate how much of the appeal was due to the special pack and how much to the fact that the vegetables were shipped by air. To the extent that the appeal was due to the package or to merchandising, this may be duplicated in many instances by similar packing and handling of surface-borne produce."

Other topics discussed in the review include the so-called uniform class rate decision of the Interstate Commerce Commission and the railroad equipment outlook. Readers are advised that the reduction of class rates in the South and West and the increase in the East will have little effect on agriculture, for the reason that most agricultural products move on commodity rates and so are unaffected, except that future adjustments of rates applicable to agricultural commodities may reflect to some extent the "tendency to insist upon an approach to national uniformity" seen in the No. 28300 decision.

The long run prospect for improvements in rail equipment depends, the publication suggests, on the extent to which the carriers take advantage of all modern improvements in the replacement programs and further standardization of equipment which are predicted. Many improvements are already well past the experimental stage and ready for general adoption. The chief developments to be expected in freight cars, it suggests, are the use of high-speed trucks and draft gear and lightweight materials. "If the railroads are to compete successfully with other means of transportation, particularly for high-rated freight, faster operation of freight trains will be important. . . . As far as can be seen at present, any gains to agriculture from these improvements will take the form of improved service rather than reduced rates."

Temperature Control Services Case Reopened

Noting that the railroads had not acted during the six-months period allowed for compliance with the findings of its prior report, the Interstate Commerce Commission has reopened the No. 20769 proceeding for the purpose of prescribing carriers' protective services (i. e., temperature-control services) to perishable freight against cold within the territory east of the eastern boundary of so-called heater territory. The reopening order also contemplates the prescription of carriers' protective services against cold based upon the temperature within the car for shipments of apples and pears from Idaho, Washington, and Oregon to all points in the country.

The prior report (see *Railway Age* of April 21, page 731) noted that carriers' protective services against cold are now "arbitrarily cut off at approximately the Illinois-Indiana state line," and went on to find that the failure of eastern roads to provide such services was "unjust and unreasonable." As noted above, it gave them six months to establish the service and promised the present reopening if they failed to do so.

Reports Bill to Tax Railway Equipment in D. C.

The Senate committee on the District of Columbia has reported favorably to the Senate the bill, S. 1278, to provide for the taxation of rolling stock of railroads and other companies operated in the District of Columbia. The measure is sponsored by the committee's chairman, Senator Bilbo, Democrat of Mississippi, and the report says that its passage is recommended by the commissioners of the District.

Materials and Prices

The following is a digest of orders and notices that have been issued by the Civilian Production Administration, the Surplus Property Administration and the Office of Price Administration, since November 2, and which are of interest to railways:

Asphalt Roofing — The order controlling the manufacture of asphalt roofing products including: smooth surface and mineral surfaced roll roofing; asphalt sidings, both roll and shingle form; built-up roofing products, including asphalt saturated felt, tarred saturated felt, and saturated and coated felt; and asphalt shingles.

Material Restrictions Still in Effect—The War Production Board, which guided American industry through the war years and started it back on the road to peace-time production, wound up its affairs on November 2. The task of guiding the nation's industrial changeover to full civilian production fell to W. P. B.'s successor, the Civilian Production Administration which inherited 52 orders and 3 main priorities regulations. This compares with about 650 controls which were in effect at one time under the war agency.

J. D. Small, head of the new agency, outlined the C. P. A.'s functions as follows:

"The Civilian Production Administration will take over and carry forward those remaining W. P. B. functions and controls which are required for the orderly transition of American industry to peace-time production. Briefly, the agency will use its power to expand the production of materials and items still in short supply; to limit the use of scarce materials and to restrict the accumulation of inventories so as to avoid speculation and hoarding. It will grant priority assistance to break bottlenecks, facilitate the fulfillment of relief and other essential export programs and allocate materials necessary in the production of low price items."

A partial list of the orders and regulations still on the books and which are of particular interest to railways follows:

Automotive Division

L-258 (salt and petroleum type anti-freeze solution) prohibits manufacture, sale and delivery. Revocation under consideration.

Building Materials Division

L-228 (asphalt and tarred roofing products and asphalt shingles)—limits manufacture to grades and types of asphalt and tarred roofing products and asphalt shingles to size and types specified. Designed to save materials, manpower and transportation.

Chemicals Bureau

M-384—restricts amount of lead for the manufacture of lead chemicals to certain specified percentages based on use during first half of 1944; restricts use of red and white lead for paints and lead for ceramics; permits issuance of directives. Controls are being retained because the supply of lead is inadequate to meet all civilian needs.

Paper Division

M-241—(paper and paperboard)—restricts production and establishes reserve production percentages. Is being retained to insure adequate reserve production to meet all government needs. Reserves of 20 per cent of production of all papers are required. Under the provisions of the order it is possible, through directives supplemented by industrial co-operation, to meet governmental and essential or emergency requirements with the use of ordinary W. P. B. priority procedure. The latter has never been used in the paper industry.

Rubber Bureau

Rubber Order R-1—As amended May 30, 1945; controls rubber, synthetic rubber and products thereof.

R-1—Appendix I Rubber, Synthetic Rubber, Balata and Products Thereof.

Appendix II Manufacturing Regulations.

Appendix V Sorting and Packing of Scrap Tire Parts.

Steel Division

M-21—establishes specifications for deliveries of iron products, steel forging and other steel products and steel alloying products; explains identification of purchase orders.

Textile, Clothing and Leather Bureau

M-47—(burlap and burlap products) restricts sale, delivery and use of burlap and burlap products and establishes quota and allocation procedure for burlap bag manufacturers.

M-51—(pigs' and hogs' bristles and bristle products) restricts imports, exports, inventories, sale and use of pigs' and hogs' bristles and bristle products.

M-84—(cordage fiber, cordage yarn, cordage, and hemp fiber) restricts sale, delivery and processing of jute, istle, manila, agave, hemp and other cordage fibers and yarns; controls allocation of non-military cordage fiber and yarn; and restricts inventory and use of damaged material.

Tin, Lead and Zinc Division

M-38—(Lead) controls inventory, use, sales and delivery; regulates supply through Metal Reserve; permits issuance of directives, requires reporting. The lack of sufficient domestic deposits of lead will probably necessitate continuance of distributive controls until sufficient imports are in sight to fill domestic deficiencies.

M-43—(tin) prohibits use in manufacture of listed products; restricts use in schedules; restricts deliveries; allocates pig tin. Possible relaxation of order depends on availability of supply from Malayan Peninsula.

M-325—(tinned and de-tinned scrap) — establishes delivery and acceptance restrictions on tinned scrap, used tinned cans, tinned wire; restricts sales; establishes procedure for collection, segregation and disposal. Will probably remain in effect until tin situation eases.

Manila Rope—No manila rope is expected to be available for general civilian use during the balance of this year or in the first quarter of 1946, the O. P. A. announced recently, following a meeting of the Cordage Industry Advisory Committee.

Although some quantities of manila fiber are arriving from the Philippines, the supply is still insufficient to allow for civilian use at the present time. Scheduling of manila rope production for the various claimant agencies will probably have to be continued in the first quarter of 1946, members of the industry advisory committee were told.

Total third quarter finished rope production amount to 44,978,000 lb. as against a quota of 50,338,000 lb. The production lag was attributed chiefly to the manpower shortage and vacations in the mills. The advisory committee reported that it saw little improvement as yet in the manpower situation.

Prices

Builders' Hardware—An increase of ten per cent in the maximum prices for low priced builders' hardware items used in building and repairing homes has been allowed by Amendment 2 to Order No. 1 MPR 591—effective November 14.

This action covers cast iron, wrought steel and a very few wrought brass builders' hardware items such as hooks, catches, hasps, brackets, drawer pulls, knobs, pulleys, mending plates, door springs, basement window sets, and bright wire goods such as steel screw eyes, hooks, etc.

Gypsum Board—A uniform ceiling price of $25 per M sq. ft., f.o.b. plant, for standard sized water repellent gypsum boards has been established by Order No. 5 under Section 13 of MPR 592—effective November 15.

Lumber—A limitation on the number of lines of ripping or resawing, or both, of Western softwood lumber for which custom mills may charge established dollar-and-cent ceilings was announced in Amendment 2 to RMPR 539—effective November 20.

This action, limits sales by custom mills of these services on Western softwood lumber for which established dollar-and-cent ceilings may be charged to not more than three lines of 6/4 in. or thinner stock or a combination of 8/4 in. and 6/4 in. or thinner stock, and not more than two lines of ripping and resawing in thinner stock.

Today's action also permits an additional charge of $6.50 per car to the open car handling charge if the buyer of Western softwood lumber requests packaging the load for mechanical unloading. This addition will cover, O. P. A. said, the direct cost of this service, and is similar to that allowed under other regulations.

Machine Tools and Machinery—An extension of the Clayton formula for pricing government-owned standard general purpose machine tools and machinery was issued November 5 by the Surplus Property Administration, in the form of S.P.A. Regulation No. 13. The effect of the new regulation is to provide a fixed price policy for all surplus machines and machine tools. The Clayton formula provided a depreciation pricing rate for tools with up to 36 months of active use. The new extension provides a price reduction rate for toods with up to 25 years of active use.

The period of active use of the machines will be determined by the selling agency on the basis of the best information reasonably available. The percentages or original cost to be applied as selling prices range all the way from 85 per cent to 90 per cent for machines used less than one month to 15 per cent to 20 per cent for those which have been in active use 25 years. Machines used more than 25 years will be sold at current market prices, but not in excess of the 25 year price determined in accordance with the formula.

Ready-Mixed Concrete — Manufacturers of ready-mixed concrete sold in certain states, may add to their ceiling prices the amount of their increased cost caused by the recent increase in Portland cement ceilings, according to Amendment 15 to Order No. 1 MPR 592—effective November 14.

This action, applies to sales in Georgia, Alabama, Tennessee, Louisiana, Mississippi, North Carolina, South Carolina, Florida and parts of Virginia.

Equipment and Supplies

FREIGHT CARS

The NEW YORK, CHICAGO & ST. LOUIS has ordered 500 50-ton box cars from the Pullman - Standard Car Manufacturing Company and 100 hopper cars from Harlan & Hollingsworth. The inquiry for this equipment was reported in the *Railway Age* of October 20.

The SOUTHERN has ordered 1,000 50-ton 50½-ft. steel-sheathed auto-box cars from the Pullman-Standard Car Manufacturing Company. The aggregate cost will be approximately $4,900,000. Deliveries are expected to begin in April, 1946. The inquiry for this equipment was reported in the *Railway Age* of October 27.

IRON AND STEEL

The PENNSYLVANIA has placed orders for 156,000 tons of rail, at an approximate cost of $6,500,000, as follows: Carnegie-Illinois Steel Corporation and the United States Steel Corporation, 78,000 tons; Bethlehem Steel Company, 69,000 tons, and the Inland Steel Company, 9,000 tons.

Construction

UNION PACIFIC.—This road has awarded a contract, amounting to $225,000, to the McNeil Construction Company, Los Angeles, Cal., for the construction of a one-story car floor elevation warehouse measuring 60 ft. by 580 ft. The cost of the project will also cover replacing of a poultry dock and paving, and provision of additional trackage.

Supply Trade

The **Aireon Manufacturing Corporation** has acquired **Lewis Electronics, Inc.**

Edward F. Galvin has been appointed manager of railroad sales of the **Simplex Wire & Cable Co.**

The **Ross & White Co.**, Chicago, has recently moved its offices into new and larger quarters at suite 2336-42 Chicago Daily News building.

James E. Sweeney, works manager, has been appointed vice-president and general sales manager of the **Kropp Forge Company.**

Ernest Spuhler has been appointed general sales manager of the **Fairmount Tool & Forging Co.** Mr. Spuhler previously served in the company's factory and in the office.

F. J. Avery, general sales representative with headquarters in Chicago for the **Elwell-Parker Electric Co.**, Cleveland, Ohio, has been appointed in charge of sales to railroad companies in the Chicago-midwest district. Mr. Avery has been associated with Elwell-Parker since 1936. Previously he was a consulting engineer.

George K. Bradfield, Jr., assistant director of research, has been appointed an assistant vice-president of the **American Car & Foundry Co.** He will assist the vice-president in charge of engineering.

John W. Mock has been appointed sales manager of the **Protectoseal Company** of Chicago. Mr. Mock formerly was sales manager of the Turner Brass Works, Sycamore, Ill.

The **Precision Equipment Company**, Chicago, has been appointed distributor for the lines of the **Republic Drill & Tool Co.** and the **Lyon Metal Products Company.**

Joseph B. Patton, a member of the industrial relations department of the Carnegie-Illinois Steel Corporation, has been appointed manager of industrial relations for the **Oliver Iron & Steel Corp.**

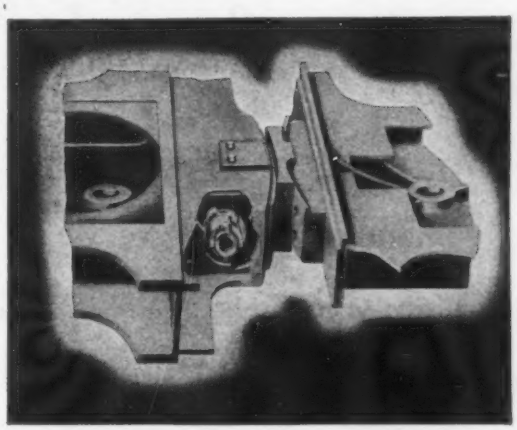
Eugene C. Bauer, president of the **Kensington Steel Company**, has been elected a vice-president and director of **Poor & Co.** The Kensington organization is a recently-acquired subsidiary of the latter company.

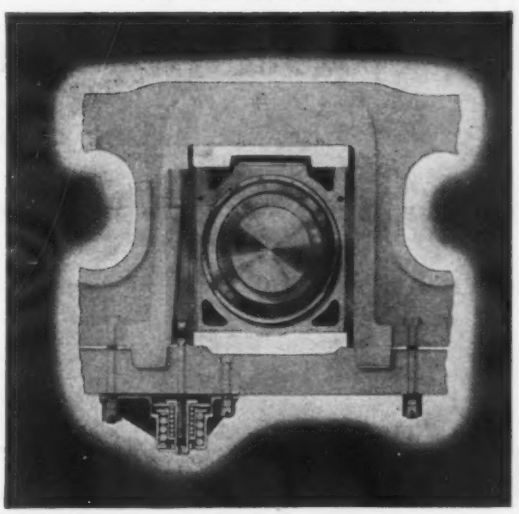
Frederick G. Schranz has established his own office in New York, where he will serve as consulting engineer and manufac-

News Department continued on second left-hand page

FOR GREATER SAFETY AT HIGHER SPEED!

Higher speeds and heavier loads demand provisions for safer locomotive operation.





Shake and vibration recorders show that **FRANKLIN E-2 RADIAL BUFFERS** reduce vertical bounce by 50%, decrease horizontal shake by 66%, and cut the acceleration of the vertical bounce by 62%.

The smoother riding that results means more than increased comfort — it means lower maintenance, increased locomotive availability, and greater safety.

FRANKLIN AUTOMATIC COMPENSATORS AND SNUBBERS, by preventing pound, minimize the wear on all locomotive bearings, and thus assure smoother and safer operation.

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THE C AND O

PLACES 10 LIMA 2-8-4s in fast freight service

Anticipating the needs of American business and its demands for the increasingly rapid movement of freight, the Chesapeake & Ohio is today adding to its fleet of Lima-built motive power ten 2-8-4 type steam locomotives.

These powerful new locomotives are known as Class K-4, and are having an important part in helping to maintain C&O's traditionally excellent service to shippers.

LIMA LOCOMOTIVE

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LIMA, OHIO

turers' representative. Mr. Schranz was vice-president of the Southwark division of the **Baldwin Locomotive Works.**

W. H. Woodings, whose election to the presidency of the **Woodings-Verona Tool Works** and the **Woodings Forge & Tool**

W. H. Woodings

Co., with headquarters at Verona, Pa., was reported in the *Railway Age* of November 17, was born at Oakmont, Pa., in 1909. He is a graduate of the Carnegie Institute of Technology, and upon completing his schooling began his business career as a sales representative of the Woodings-Verona organization. Some time later he was elected vice-president of both companies, the position he held at the time of his election to president.

Emanuel Woodings, whose election to vice-chairman of the board of the **Woodings Forge & Tool Co.** and the **Woodings-Verona Tool Works,** was reported in the *Railway Age* of November 17, entered the employ of the Verona Tool Works (now a part of the Woodings-Verona Tool Works) as an apprentice machinist at the

Emanuel Woodings

age of 15. After serving in the machine shop 14 years, he was promoted to foreman of the forge shop, subsequently advancing to general manager, vice-president and president. In 1924 Mr. Woodings resigned his position with the Verona Tool Works and formed his own company, the Woodings Forge & Tool Co., which in 1931 became associated with the Verona Tool Works.

James B. Rosser, administrative assistant to the president of the **Pullman-Standard Car Manufacturing Company,** has been elected vice-president in charge of eastern sales of railroad equipment, with headquarters at New York.

Dr. J. T. Rettaliata, who recently was appointed director of the mechanical engineering department at the Illinois Institute of Technology, will continue his association with the **Allis Chalmers Manufacturing Company** as consultant on gas turbine development and similar problems.

Albert H. Charlton has been appointed sales manager of the aluminum division of the **Reynolds Metals Company,** with headquarters in Louisville, Ky. Mr. Charlton had been eastern sales manager for the aluminum division, with headquarters in New York.

James A. Cain, formerly assistant manager of the Pittsburgh, Pa., division of the **A. M. Byers Company,** has been appointed manager of a new division established by the company in Atlanta, Ga., to serve Georgia, North Carolina, South Carolina, Florida, Alabama and parts of Tennessee.

OBITUARY

Edward H. Leahy, traffic manager of the Link Belt Company, died on November 12 in an Oak Park (Ill.) hospital.

Eldon R. Campbell, who made his headquarters in the New York offices of the **Massachusetts Mohair Plush Company,** died on November 10. He was 49 years of age.

John H. Locke, of Bryn Mawr, Pa., a retired executive of the **General Steel Casting Corporation,** died on November 12. He was 57 years of age. Mr. Locke was graduated from the Massachusetts Institute of Technology and from Harvard University. He was employed with the Commonwealth Steel Corporation in Granite City, Ill., for many years. When Commonwealth merged with General Steel Castings in 1929, Mr. Locke was transferred to the Eddystone, Pa., plant and was appointed vice-president two years later. He retired in 1942.

John J. Roberts, retired president of the Roberts & Schaefer Co., Chicago, whose death on November 3 was reported in the *Railway Age* of November 10, was born at Sadoris, Ill., in 1873, and was a graduate of the University of Illinois. After leaving college he became associated with Col. Warren R. Roberts, another former president of the Roberts and Schaefer organization, in general contracting work, during which they built the Illinois State courthouse at Springfield, Ill. Some time later John J. Roberts went with the George A. Fuller Company, New York, as a member of the estimating department. In 1903 the original co-partnership of Roberts, Schaefer and Company was formed, and one year later was incorporated under the present name. Mr. Roberts served as treasurer for several years before being elected to the presidency from which he retired in May, 1941.

Financial

BALTIMORE & OHIO.—*Court Approves Adjustment Plan.*—On November 20, a three-judge federal court at Baltimore, Md., approved the $500 million debt adjustment plan of the Baltimore & Ohio with some modification, which the court said did not require a resubmission of the plan to the Interstate Commerce Commission or to the affected security holders.

CANADIAN PACIFIC.—*New Director.*—Sir John Anderson of London, England, has been appointed a director to fill the vacancy occasioned by the death of Reginald McKenna.

CENTRAL OF GEORGIA.—*Reorganization Plan.*—In a supplemental report the Interstate Commerce Commission has modified in certain respects the plan for this road's reorganization, under section 77 of the Bankruptcy Act, which Division 4 of the commission recently approved. The main provisions of the plan were outlined in *Railway Age* of July 21, page 113. No change has been made in the total capitalization of the new company, but minor variations have been authorized in the amounts of the new securities to be issued. Under the provisions of the supplemental report, the $84,408,793 total capitalization (as of the effective date of the plan, January 1, 1945) will include: Undisturbed equipment obligations, $3,499,852; Chattanooga, Rome & Southern divisional bonds, $133,978; first mortgage series A bonds, $13,866,022; series A income mortgage bonds, $2,589,647; series B income mortgage bonds, $13,410,353; series A preferred stock, $928,328; series B preferred stock, $17,865,694; common stock (par or stated value), $32,114,924. In line with these changes in the amounts of new securities to be issued, minor variations have been made in the allocations thereof to various classes of holders of claims against the debtor company.

Except for certain changes made in the division's plan for the purpose of perfecting the language, the other principal variation from it under the supplemental report is a requirement that, so long as the Reconstruction Finance Corporation holds at least 20 per cent of the voting stock of the new company, at least one voting trustee is to be named by it.

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—*Reorganization.*—Division 4 of the Interstate Commerce Commission has granted authority for the consummation of the plan of reorganization for this company previously approved by the commission and the court, in connection with which new securities will be issued, certain obligations and liabilities will be assumed, and a modified lease between the reorganized company and the Chicago, Terre Haute & Southeastern will be executed. The old company is being reorganized with a total capitalization of $533,090,700, the plan being effective as of January 1, 1944. The approved plan had provided for an alternative distribution of securities after payment in full of the Reconstruction Finance Corporation's claim, which alternative is to be effected. The modified lease of the Terre Haute had

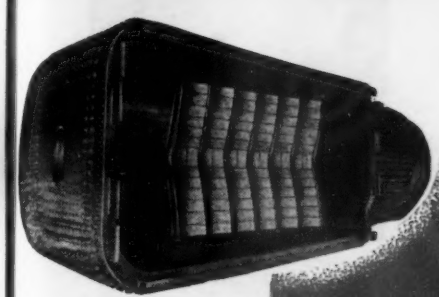
News Department continued on next left-hand page

Eating up the miles... economically

● On the heavy haul and the long run, Security Circulators definitely improve locomotive performance.

In addition to improving the circulation of water over the crown sheet and in the side water-legs, Security Circulators reduce honeycombing, flue plugging and cinder cutting.

Security Circulators permit the use of a 100% arch, prolong the life of arch brick, and also act as struts or stays, bracing the firebox against undue distortion.



AMERICAN ARCH COMPANY, INC.

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SECURITY CIRCULATOR DIVISION

required acceptance by a substantial majority of that company's bondholders, which was obtained, and the division has authorized the issue of modified bonds of the Terre Haute and associated companies in conformity with the plan.

CHICAGO, ROCK ISLAND & PACIFIC.—*Reorganization Plan.*—Division 4 of the Interstate Commerce Commission has ordered the plan of reorganization of this road which has been approved by the commission and the court to be submitted to eleven classes of creditors of the old company, for their acceptance or rejection. Ballots are receivable on or before January 7, 1946, except when mailed outside the United States. Those to whom ballots will be sent are holders on November 23 of the following classes of claims: General mortgage 4's; first and refunding mortgage 4's; secured 4½ per cent gold bonds; convertible 4½ per cent gold bonds; Burlington, Cedar Rapids & Northern consolidated first mortgage 5's; Choctaw, Oklahoma & Gulf consolidated first mortgage 5's; Rock Island, Arkansas & Louisiana first mortgage 4½'s; St. Paul & Kansas City Short Line first mortgage 4½'s; Peoria Railway Terminal first mortgage 4's; Little Rock & Hot Springs Western first mortgage 4's; miscellaneous claims, except general creditors of the St. Paul & Kansas City Short Line. Old company equity holders will not participate in the balloting.

ILLINOIS CENTRAL.—*To Consider New Lien.*—The Illinois Central has called a stockholders' meeting for January 16, 1946, to consider creation of a new mortgage on the company's property and the issuance of new bonds under the mortgage to retire old issues maturing after 1950. In October the company authorized a call for tenders of $53,115,000 of non-callable bonds due in 1950-52. To the extent that tenders are accepted the purchase price of the non-callable bond will be paid out of treasury funds or from a temporary loan.

If the refunding program is approved, the Illinois Central proposes to call for redemption on May 1, 1946, its $35,000,000 of refunding mortgage 4 and 5 per cent bonds. The cost of the refunding will be met by the sale of not over $85,000,000 of new first mortgage bonds, issuable in one or more series, with a maturity of not less than 25 or more than 50 years and with an interest rate between 2½ and 4 per cent. In addition, the plan proposes the issuance from time to time, without further approval of stockholders, of bonds for refunding underlying bonds or bonds issued under the new mortgage, up to a total amount not exceeding $180,000,000 outstanding at any one time.

MISSOURI-KANSAS-TEXAS OF TEXAS.—*Two Directors Elected.*—R. J. Morfa, chairman of the board of the Missouri-Kansas-Texas, and Judge James A. Elkins, president of the City National Bank of Houston, Tex., have been elected members of the board of the Missouri-Kansas-Texas of Texas, a subsidiary of the Katy.

LOUISIANA MIDLAND.—*Securities.*—This new company has applied to the Interstate Commerce Commission for authority to issue 2,750 shares of capital stock of $100 par value and 5 promissory notes, each in the amount of $35,000, to be secured by vendor's lien or other lien or mortgage. These issues are intended to effectuate the acquisition of a 76.3-mile line from Packton, La., to Vidalia which has been operated by the Louisiana & Arkansas (previous item in *Railway Age* of September 22, page 505).

NEW YORK, NEW HAVEN & HARTFORD.—*To Sell Steamship Business.*—On November 14 the New York, New Haven & Hartford petitioned the federal court for permission to dispose of what remains of its steamship operations and to spend nearly $1,500,000 for parlor cars and for interest payments. The company proposes to sell the New England Steamship Company to the Massachusetts Steamship Lines, Inc., for $750,000. The New England Steamship Company, which once operated boat lines connecting Bridgeport, New Haven and New London, Conn., Providence, R. I., and Fall River, Mass., with New York, now operates only the line between New Bedford, Mass., Martha's Vineyard and Nantucket. The company also asked permission to purchase 95 parlor cars from the Pullman Company for $630,000. Hearings on the petition are scheduled for November 23.

PERE MARQUETTE.—*Promissory Notes.*—Division 4 of the Interstate Commerce Commission has authorized this company to issue $467,800 of promissory notes in evidence, but not in payment, of the unpaid portion of the purchase price of two 2,000-hp. Diesel-electric passenger locomotives at $175,164 each and three 1,000-hp. Diesel-electric switching locomotives at $78,549 each, which it is acquiring under a conditional sale agreement from the Electro-Motive Division of General Motors Corporation. The notes have been sold on a 1.6 per cent annual interest basis to the National Commercial Bank & Trust Company of Albany, N. Y. The division pointed out in its report that this road has contracted for the following additional equipment to be delivered in 1946: Two streamlined passenger trains; 200 automobile box cars; and 100 covered hopper cars.

ST. LOUIS-SAN FRANCISCO.—*Reorganization Expenses.*—Division 4 of the Interstate Commerce Commission has approved "for the time being" a maximum limit of $10,000 for expenses of E. N. Brown, chairman of the old company's board of directors, in connection with the reorganization proceedings.

SOUTHERN PACIFIC.—*Arranges Bank Loan.*—The Southern Pacific has completed arrangements for a loan of $12 million from a group of banks, headed by The Union Trust Company of Pittsburgh (Pa.) and the First National Bank of Chicago, to finance 4,050 units of freight train equipment already ordered and estimated to cost about $16 million. The loan will carry interest at 1.7 per cent annually and will mature in equal semi-annual installments over a 12-year period.

Average Prices Stocks and Bonds

	Nov. 20	Last week	Last year
Average price of 20 representative railway stocks..	63.10	55.75	42.90
Average price of 20 representative railway bonds..	100.01	99.60	90.87

Dividends Declared

Chicago & Eastern Illinois.—"A" $1.00, payable December 17 to holders of record December 3.

Illinois Central.—Semi-annually, (leased lines), $2.00, payable January 1 to holders of record December 18.

New York Central.—Year-end, $1.00, payable January 15 to holders of record December 1.

North Pennsylvania.—Quarterly, $1.00, payable December 10 to holders of record December 3.

Pennsylvania.—Year-end, $1.50, payable December 13 to holders of record November 24.

Pittsburgh Bessemer & Lake Erie.—8% preferred, semi-annually, $1.50, payable December 1 to holders of record November 15.

Pittsburgh & Lake Erie.—$2.00, payable December 15 to holders of record November 26.

Southern Pacific.—Increased quarterly, $1.00, payable December 17 to holders of record November 26.

Texas & Pacific.—Year-end, also preferred, semi-annually, both $2.50, payable December 20 to holders of record November 30.

Virginian.—Quarterly, 62½¢, payable January 1 to holders of record December 17.

Abandonments

ATCHISON, TOPEKA & SANTA FE.—This company has applied to the Interstate Commerce Commission for authority to abandon a branch from Atwood, Calif., to Olinda, 3.67 miles.

CENTRAL OF NEW JERSEY.—Imposing the conditions for the protection of employees adopted in the Burlington case, 257 I. C. C. 700, Division 4 of the Interstate Commerce Commission has authorized this road to abandon two segments of a branch, one of 0.88 mile at East Long Branch, N. J., and one from Highland Beach to East Long Branch, 5.5 miles.

Railway Officers

EXECUTIVE

Carey Hosmer, whose promotion to assistant to the president of the Missouri-Kansas-Texas, with headquarters at St. Louis, Mo., was reported in the *Railway*

Carey Hosmer

Age of November 10, was born at Seymour, Tex., on September 26, 1891. He entered railway service in August, 1906, as a messenger of the Katy at Atoka, Okla., subsequently holding a number of minor posi-

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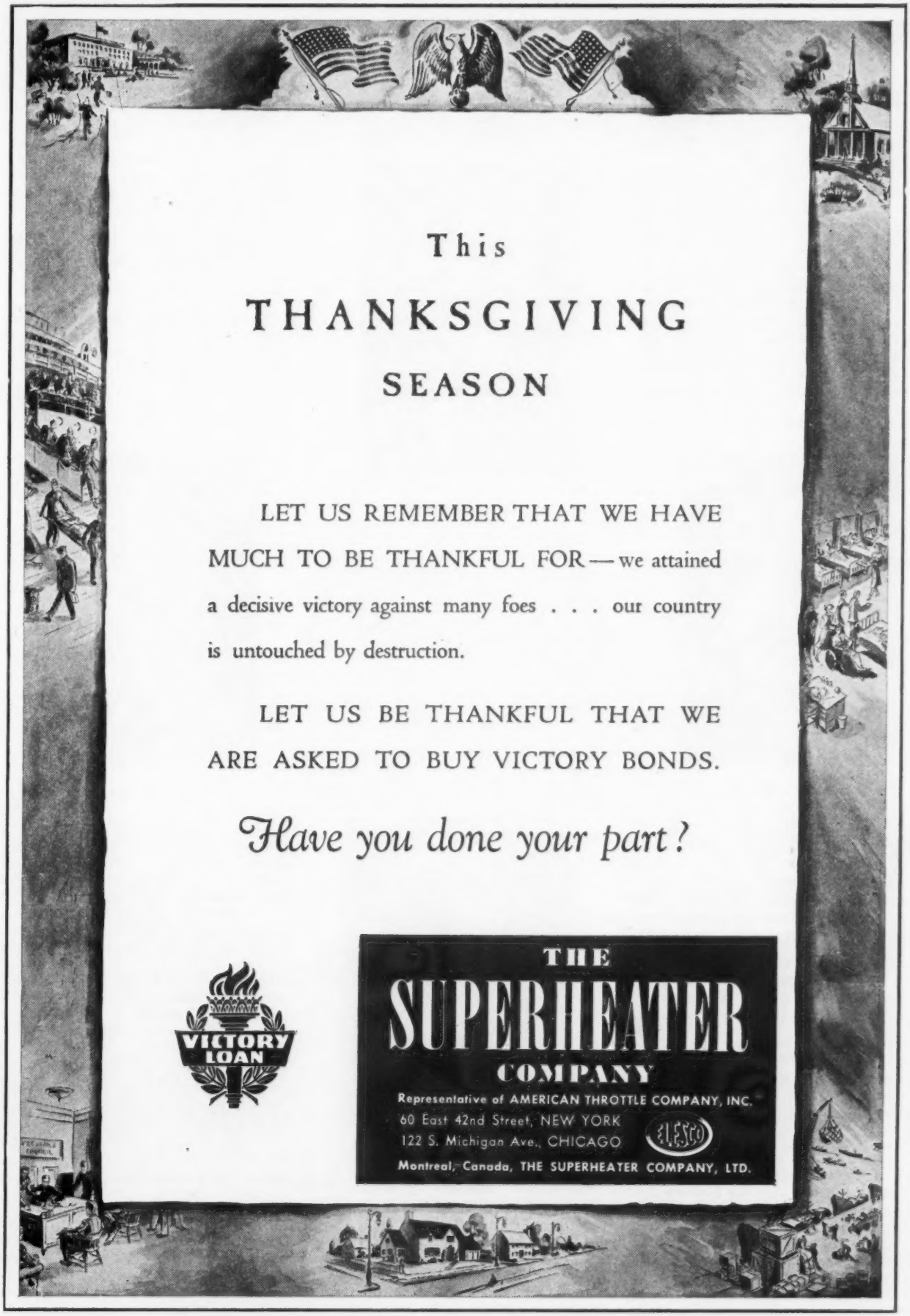
This
THANKSGIVING
SEASON
LET US REMEMBER THAT WE HAVE MUCH TO BE THANKFUL FOR — we attained a decisive victory against many foes . . . our country is untouched by destruction.
LET US BE THANKFUL THAT WE ARE ASKED TO BUY VICTORY BONDS.
Have you done your part?
VICTORY LOAN
THE
SUPERHEATER
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Representative of AMERICAN THROTTLE COMPANY, INC.
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tions. In June, 1917, he became traveling auditor at Muskogee, Okla., and in September of the same year, agent at Atoka. From December, 1919, he was agent successively at Durant, Okla., Tulsa, and Wichita Falls, Tex., remaining in the latter position until June, 1928, when he was advanced to general agent at Dallas, Tex., where he remained until he moved to Kansas City, Mo., in September, 1931, in the same capacity. In January, 1931, Mr. Hosmer was promoted to superintendent of terminals at Kansas City, holding this position until March, 1944, when he was promoted to superintendent of the northwestern district, with headquarters at Wichita Falls, the position he held at the time of his new appointment.

Daniel J. Smith, whose election as president of the Lake Terminal, the McKeesport Connecting, the Northampton & Bath, and the Hannibal Connecting was announced in the October 20 issue of *Railway Age*, was born on August 6, 1900, at Pittsburgh, Pa. He has been an employee of the United States Steel Corporation and subsidiary companies, engaged in traffic

Daniel J. Smith

and transportation work for more than 29 years. His recent appointment became effective on October 1, 1945.

Donald V. Fraser, president of the Missouri--Kansas-Texas, has also been elected president of the Missouri-Kansas-Texas of Texas (part of the Katy system).

Amnon I. Derr, vice-president and secretary of the Pittsburgh & West Virginia, Pittsburgh, Pa., will retire November 30, after more than 21 years with that company.

J. W. Pfau, chief engineer of the New York Central at New York, has been appointed assistant to vice-president, improvements and development, with headquarters as before.

A. G. Donovan, Jr., whose promotion to assistant to the vice-president of the Texas & Pacific, with headquarters at Dallas, Tex., was reported in the *Railway Age* of November 17, was born at Ft. Worth, Tex., on February 18, 1911, and received his higher education at Texas Christian University. He entered railroad service on June 8, 1928, with the Texas & Pacific as a clerk at Ft. Worth, subsequently holding several minor positions until April 16, 1938, when he became traveling freight agent at Los Angeles, Cal. On October 1, 1939, Mr. Donovan was further advanced to general agent at New York, which position he held until April 10, 1942, when he was granted a leave of absence to serve with the armed forces.

A. F. Tidabock, whose retirement as president of the Northampton & Bath and the Hannibal Connecting at Pittsburgh, Pa.,

A. F. Tidabock

was reported in the October 10 issue of *Railway Age*, was born on March 19, 1877, and entered railroad service with the Northampton & Bath on October 1, 1903. He advanced to general manager of the company in January, 1916, and president in 1930. In 1936 he became president of the Hannibal Connecting also.

FINANCIAL, LEGAL AND ACCOUNTING

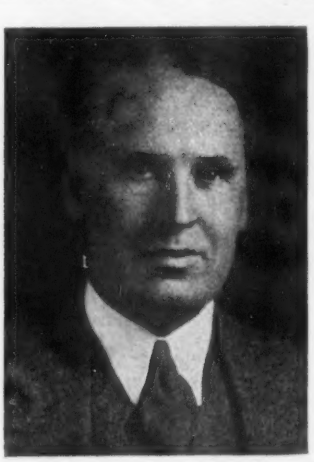
Reuben J. Hagman, whose promotion to general solicitor of the Great Northern, with headquarters at St. Paul, Minn., was reported in the *Railway Age* of November 10, was born at Charles City, Iowa, on February 2, 1888, and was educated at

Reuben J. Hagman

Beloit College and the School of Law of the University of Washington at Seattle, Wash. He entered railroad service as a stenographer in the engineering department of the Great Northern in April, 1906, at Spokane, Wash., subsequently holding several minor positions until January 1, 1917, when he became assistant attorney at Seattle. From June, 1918, to December, 1918, he was furloughed for service in the armed forces, returning to the Great Northern in February, 1919, as assistant attorney at Spokane, where he served until January, 1920, when he was advanced to attorney at St. Paul. From March, 1922, to October, 1926, Mr. Hagman served as assistant general solicitor with the same headquarters. In October, 1926, he was promoted to assistant general counsel at St. Paul, which position he held until his new appointment.

H. A. Sides, superintendent of stations and transfers of the Pennsylvania at New York, has been appointed assistant freight claim agent at Philadelphia, Pa.

James H. Mulally, whose promotion to assistant general counsel of the Great Northern, with headquarters at St. Paul, Minn., was reported in the *Railway Age* of November 10, was born at Danvers, Mass., on June 3, 1883, and received his higher education at Dartmouth College and



James H. Mulally

the School of Law of the University of Minnesota. He was engaged in the general practice of law at St. Paul from 1908 to 1920, when he entered the service of the Great Northern as attorney, with headquarters at St. Paul. In 1932 Mr. Mulally was promoted to general attorney, the position he held at the time of his new appointment.

George L. Buland, eastern general counsel of the Southern Pacific at New York, has been appointed associate general counsel with headquarters at San Francisco, Cal.

E. O. Walker, who has been on leave of absence from the Fort Worth & Denver City and the Wichita Valley to serve with the Office of Defense Transportation since September, 1942, has returned to his former position of car accountant, with headquarters at Ft. Worth, Tex.

G. H. Penland, general attorney of the Missouri-Kansas-Texas at Dallas, Tex., has been promoted to general solicitor, with the same headquarters. **Wayne R. Howell,** assistant general attorney at Dallas, has been advanced to assistant general counsel, with headquarters at St. Louis, Mo.

OPERATING

M. V. Dougherty, brakeman for the Union Pacific, has been promoted to trainmaster with headquarters at Marysville, Kan.

F. E. Wootton, assistant division superintendent of the Canadian Pacific at Kenora, Ont., has been promoted to superintendent of the Medicine Hat division, with headquarters at Medicine Hat, Alta.

J. H. Little, superintendent of transportation of the Missouri-Kansas-Texas at Denison, Tex., has been promoted to general superintendent of transportation with the same headquarters. The position of superintendent of transportation has been abolished.

R. E. Taylor, superintendent of the Canadian Pacific at Medicine Hat, Alta., has been appointed superintendent of transportation, Eastern lines, with headquarters at Toronto, Ont., succeeding **C. O. McHugh,** whose death was reported in the November 3 issue of *Railway Age.*

Andrew F. McIntyre, formerly superintendent of passenger transportation of the Eastern region of the Pennsylvania with headquarters at Philadelphia, Pa., has been honorably discharged from military service as brigadier general in the Transportation Corps of the United States Army, and will shortly return to railroad duty.

F. Sparks has been appointed trainmaster of the Eastern division of the Missouri Pacific, with headquarters at Jefferson City, Mo., succeeding **F. E. Fletcher,** who has been transferred to the St. Louis, Glencoe and Bagnall subdivisions, with headquarters as before at Jefferson City. He replaces **E. M. Bishop,** who in turn has been transferred to the Illinois division, with headquarters at Bush, Ill., relieving **M. F. Weeks,** who has been assigned to other duties.

J. P. Allison, whose promotion to superintendent of the Marion division of the Erie, with headquarters at Huntington, Ind., was reported in the *Railway Age* of November 17, was born at Baltimore, Md., on July 3, 1905, and received his higher education at Cornell University, from which he was graduated in 1928 with the degree of civil engineer. He entered railroad service on April 1, 1929, in the maintenance of way department of the Erie, holding various positions until May, 1940, when he was promoted to track supervisor at Jersey City, N. J. From February, 1941, to August, 1944, Mr. Allison served as trainmaster with headquarters at Hornell, N. Y., Dunmore, Pa., and Meadville. In September, 1944, he was advanced to assistant superintendent of the Marion division, with headquarters at Chicago, the position he held at the time of his recent promotion.

Frank Lockwood, whose promotion to superintendent of station service and freight claim prevention of the Chicago, Rock Island & Pacific, with headquarters at Chicago, was reported in the *Railway Age* of November 3, was born on November 15, 1893, at Fleckney, England, and entered railway service with the Rock Island as a relief agent-operator on April 18, 1912. From December 18, 1913, to August 31, 1939, he served as agent-operator at West Bend, Iowa, being promoted to general agent at Sioux Falls, S. D., on September 1 of the latter year. On April 1, 1941, Mr. Lockwood was advanced to freight agent,

Frank Lockwood

with headquarters at Minneapolis, Minn., serving in this capacity until August 1, 1945, when he was promoted to assistant superintendent of station service and freight claim prevention, which position he was holding at the time of his recent promotion.

Samuel D. Stainton, whose appointment as superintendent of organization for the southern departments of Railway Express at Atlanta, Ga., was announced in the November 19 issue of *Railway Age,* was born on November 28, 1889, and has served with Railway Express for 40 years. He interrupted his express career during World War I to enlist in the United States Army. After receiving his honorable discharge, he returned to his former position and progressed through various posts as route agent at Rocky Mount, N. C., supervisor of transportation, agent, at Macon, Ga., and general

Samuel D. Stainton

agent at Jacksonville, Fla. Mr. Stainton was then promoted to superintendent of the Georgia division, which post he maintained until his recent advancement.

C. F. Wiegele, assistant to the vice-president of the New York Central, Lines West of Buffalo, at Chicago, has been promoted to general manager, Lines West of Buffalo, with headquarters at Cleveland, Ohio, succeeding to part of the duties of **F. F. Riefel,** vice-president and general manager. Mr. Riefel remains at Cleveland as vice-president. **J. J. Frawley,** assistant to the general manager at Cleveland, has been advanced to assistant general manager with the same headquarters, replacing **E. A. Dougherty,** whose promotion to chief engineer, Lines West of Buffalo, with headquarters at Chicago, is reported elsewhere in these columns. **N. D. Hyde,** assistant to the vice-president at Chicago, has had his duties extended to include operating as well as engineering matters, relieving Mr. Wiegele of the former. **E. J. Molyneaux,** chief clerk to the operating vice-president, has been advanced to transportation assistant, with headquarters as before at Chicago.

TRAFFIC

Leo S. Tobin has been appointed district passenger agent of the Seaboard Air Line at Montreal, Que.

K. R. Stoney, chief of the rate bureau of the Western Pacific at San Francisco, Cal., has been promoted to eastern foreign freight agent, with headquarters at Chicago, a newly-created position.

W. M. Cook, assistant traffic manager of the Missouri Pacific at San Francisco, Cal., has been promoted to Western traffic manager with the same headquarters, a change of title.

A. S. Eaton, general agent of the Denver & Rio Grande Western at Cleveland, Ohio, has been appointed district freight and passenger agent there. **S. E. Mullikin** succeeds him as general agent.

On page 769 of the *Railway Age* of November 10, **Fred E. Clarke** was reported as having been appointed district passenger agent of the Alton at Little Rock, Ark. The name should have been given as **Fred E. Clarke, Jr.**

Edward P. Cronk, district freight agent of the Canadian National at Montreal, Que., has been appointed district freight agent at Portland, Me., succeeding **J. M. Sparling,** whose retirement was announced in the November 17 issue of *Railway Age.*

A. Rice King, recently honorably discharged from the Army as a colonel, has resumed his former position as Florida passenger agent of the Nashville, Chattanooga & St. Louis with headquarters at Jacksonville, Fla.

N. P. Van Maren, division freight and passenger agent of the Chicago, Milwaukee, St. Paul & Pacific at Mason City, Iowa, has been promoted to general agent, with headquarters at Omaha, Neb., succeeding **M. M. Wolverton,** who has been assigned to other duties.

I. T. Marine, western freight traffic manoger of the Pennsylvania at Chicago, has been appointed freight traffic manager with headquarters at Philadelphia, Pa., succeeding **E. S. Neilson,** who has retired after more than 41 years of service. **A. S. Jennings,** general coal and ore agent at Cleveland, succeeds Mr. Marine. **W. P.**

News Department continued on second left-hand page

IT'S A GREAT NEW DAY FOR RAILROADING

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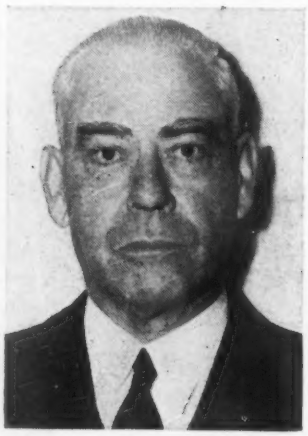
Stuart, assistant general freight agent at Pittsburgh, Pa., has been named general coal and ore agent at Cleveland.

William Edward Burnett, whose appointment as general freight agent of the Norfolk & Western at Roanoke, Va., was announced in the November 11 issue of *Railway Age*, was born in Lynchburg, Va.,



William Edward Burnett

on April 27, 1886. He entered railroading in 1901 as a clerk in the transportation department of the Norfolk & Western at Roanoke, Va. He was transferred to the freight traffic department in 1907. Mr. Burnett served as commercial agent at Fort Worth, Tex., from 1921 until his advancement to division freight agent at Roanoke, Va., in 1927. His promotion to general freight agent there became effective November 1.

Henry D. Wilkerson, whose promotion to assistant freight traffic manager of the Norfolk & Western, with headquarters at Columbus, Ohio, was reported in the *Railway Age* of November 10, was born at Prospect, Va., and entered railroad service on May 20, 1898, as a stenographer with the Norfolk & Western at Richmond, Va. On

Henry D. Wilkerson

May 1, 1900, he became soliciting freight agent with the same headquarters, and served in this capacity until March 15, 1908, when he was promoted to commercial agent at Pittsburgh, Pa. On May 15, 1932, he was promoted to general agent with the same headquarters, holding this position until April 1, 1934, when he was further advanced to assistant general freight agent at Columbus, Ohio. On May 1, 1939, Mr. Wilkerson was promoted to general freight agent, with headquarters as before at Columbus, the position he was holding at the time of his recent promotion.

George Brunner, whose appointment as Eastern traffic manager of the Missouri Pacific was announced in the November 17 issue of *Railway Age*, was born in New York on January 24, 1897, and entered railroading with the New York Central in 1914 as a messenger on the merchandise platform, 60th Street Station, New York. He subsequently held positions as clerk, freight checker, and alternate foreman there, then as a freight checker on the piers, and as a clerk in the yardmaster's office. He became assistant to chief clerk at the local freight office, Sixty-fifth street, then assistant chief clerk to foreign freight agent at 6 Beaver street. He served with the United States Army Engineers in World War I, returning to the New York Central in 1919. In 1924, Mr. Brunner joined the Missouri Pacific lines as chief clerk to the general Eastern freight agent

George Brunner

at New York. He was successively promoted to the positions of commercial agent in 1932, general agent in 1934, and general eastern freight agent in 1941. His recent appointment to the newly-created position of eastern traffic manager became effective on November 1. The position of general eastern freight agent, New York, has been abolished.

H. W. Large, recently honorably discharged from the Navy as a lieutenant commander and, prior to entering naval service, general coal freight agent of the Pennsylvania at Chicago, has been appointed freight traffic manager at Detroit, Mich., succeeding **S. T. Stackpole,** who has retired.

G. C. Victory has been appointed general agent of the Fort Worth & Denver City and of the Wichita Valley at Lubbock, Tex., succeeding **E. C. Kuykendall,** who has been transferred to Dallas, Tex. **R. A. Craig** has been appointed assistant general freight and passenger agent, with headquarters at Dallas.

Robert F. Dickson, whose appointment as general freight agent of the Norfolk & Western at Roanoke, Va., was announced in the November 10 issue of *Railway Age*, was born on September 15, 1897, at Chattanooga, Tenn., and entered railroad service there in 1915 as a stenographer with the Norfolk & Western. In 1920 and 1921 he served as clerk in Chattanooga and in Jacksonville, Fla. He became traveling freight agent at Birmingham, Ala., in 1921, and

Robert F. Dickson

commercial agent at Memphis, Tenn., in 1923. Mr. Dickson was advanced to general agent at Pittsburgh, Pa., in 1939, and maintained this position until his recent promotion.

C. M. Lyon, general baggage and milk traffic agent for the Delaware, Lackawanna & Western at Hoboken, N. J., has been promoted to manager mail, express, baggage and milk traffic there. The position of superintendent mail and express traffic, formerly held by **Henry Foulkes,** deceased, has been abolished.

J. E. Marshall, traveling freight agent of the Chicago, Milwaukee, St. Paul & Pacific at St. Louis, Mo., has been promoted to general agent with the same headquarters, succeeding **G. W. Stoltz,** who has retired. **G. E. Benz,** division freight and passenger agent at Aberdeen, S. D., has been advanced to general agent with headquarters at Minneapolis, Minn., relieving **W. E. Sinclair,** who has also retired.

D. E. McKeithen, general agent of the St. Louis-San Francisco at Pittsburgh, Pa., has been promoted to assistant freight traffic manager, with headquarters at St. Louis, Mo. **J. L. Scales,** assistant to the freight traffic manager at St. Louis, has been advanced to assistant freight traffic manager, with the same headquarters. **O. P. Rainey,** general agent at Blytheville, Ark., has been advanced to traffic manager with headquarters at Wichita, Kan., and **W. S. Johnston,** traffic representative at Birmingham, Ala., has been promoted to general agent at Blytheville, succeeding Mr. Rainey. **A. C. Bringleson,** traffic representative at Pittsburgh, has been promoted to general agent with the same headquarters, replacing Mr. McKeithen. **A. D. Masters,** general agent at Boston, Mass., has been transferred to Milwaukee, Wis.

H. D. Sweetin, general agent of the St. Louis-San Francisco at Atlanta, Ga.,

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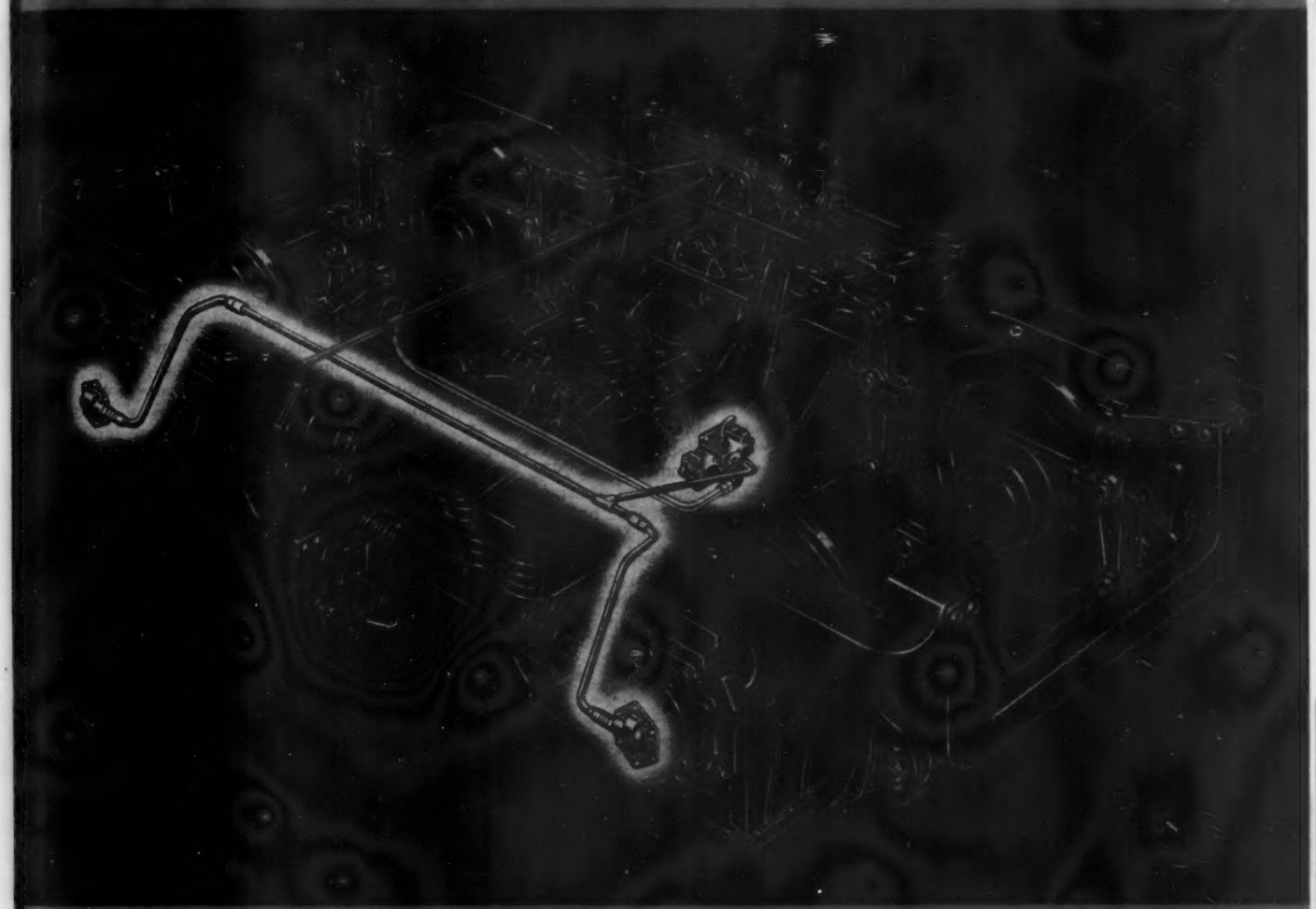
"AP" Decelostat



Self-Contained on Truck

SELF-CONTAINED anti-wheel slip control is incorporated in passenger car trucks equipped with the "AP" Mechanical-Pneumatic Decelostat. The Decelostat is applied to the journal box and is driven directly from the end of the axle. It is an inertia device and therefore operates on simple, mechanical principles. As no additional connections between car body and truck are required with the "AP" Decelostat, trucks thus equipped carry anti-wheel slip protection throughout their range of assignment.

WESTINGHOUSE AIR BRAKE CO.

WILMERDING, PENNSYLVANIA

has been promoted to traffic manager, with headquarters at Tulsa, Okla., succeeding **J. W. Mahaney,** who has been transferred to Memphis, Tenn., replacing **R. E. Buchanan,** whose death on November 9 is reported elsewhere in these columns. **J. W. Tipton,** traffic representative at Wichita, Kan., has been advanced to general agent at Little Rock, Ark., succeeding **Wayne Young,** who in turn has been transferred to Atlanta, relieving Mr. Sweetin. **Frank L. Coulter,** traffic manager at Los Angeles, Cal., has been promoted to western traffic manager with the same headquarters. **C. M. Jones,** division passenger agent at Dallas, Tex., has been promoted to general agent with headquarters at Oklahoma City, Okla. **J. V. Flaig, R. E. Maring, Delbert Fields, P. F. Atkinson,** and **Charles Walpole** have been advanced to general agents, with headquarters respectively at Birmingham, Ala., Kansas City, Mo., St. Louis, Mo., Tulsa and Memphis.

ENGINEERING & SIGNALING

G. A. Noren, engineering assistant to executive vice-president of the New York Central at New York, has been appointed chief engineer, Buffalo and East, with headquarters as before.

R. J. Middleton, assistant chief engineer of the Chicago, Milwaukee, St. Paul & Pacific at Chicago, has been promoted to chief engineer with the same headquarters, succeeding **W. H. Penfield,** who has retired after more than 50 years of railroad service.

E. A. Dougherty, assistant general manager of the New York Central, Lines West of Buffalo, at Cleveland, Ohio, has been promoted to chief engineer, Lines West of Buffalo, with headquarters at Chicago, succeeding **F. J. Jerome,** who has been advanced to engineering assistant to the executive vice-president with headquarters at New York.

MECHANICAL

H. L. Hewing, C. E. Barrett and **A. V. Nystrom** have been appointed district general car foremen of the Chicago, Milwaukee, St. Paul & Pacific, with headquarters respectively at Tacoma, Wash., Minneapolis, Minn., and Chicago.

G. A. Kidwell, enginehouse foreman, Potomac yard, of the Baltimore & Ohio, the Pennsylvania, the Richmond, Fredericksburg & Potomac, and the Southern at Alexandria, Va., has been appointed master mechanic there, succeeding **R. E. McGahey,** who will soon retire after forty years' service.

M. W. McMahon, locomotive appliances inspector for the New York Central at New York, has been appointed assistant general superintendent of motive power there. He succeeds **S. T. Kuhn,** who has become master mechanic at Columbus, Ohio, succeeding **W. C. Wardwell.** Mr. Wardwell has been transferred to Buffalo, N. Y., succeeding **J. Singer,** retired. **W. H. Chidley,** gang foreman at Collinwood locomotive terminal, Ohio, succeeds Mr. McMahon as locomotive appliances inspector at New York.

PURCHASES AND STORES

K. P. Chinn, whose promotion to purchasing agent of the Texas & New Orleans (part of the Southern Pacific System), with headquarters at New Orleans, La., was reported in the *Railway Age* of November 10, was born at Wichita, Kan., on June 29, 1893, and entered railroad service in October, 1912, as a commissary clerk for the Southern Pacific in Texas and Louisiana, holding several minor positions until December, 1917, when he entered the armed services. Returning to the Texas & New Orleans in January, 1919, as division storekeeper, he was promoted to traveling storekeeper a short time later, and served in that capacity until 1925, when he was advanced to assistant general storekeeper. Promoted to trainmaster in 1929, he returned to the position of assistant general storekeeper in 1931, with headquarters at Houston, Tex. In 1937 Mr. Chinn was promoted to assistant superintendent of the Dallas-Austin division, with headquarters at Ennis, Tex., and Austin. On March 1, 1942, he was further advanced to assistant purchasing agent at New Orleans, which position he held at the time of his recent promotion.

SPECIAL

J. K. Tambling, assistant general supervisor of first aid for the Canadian National at Montreal, Que., has been appointed general supervisor of first aid, succeeding **A. O. Beck,** who has retired after 43 years' railroad service.

OBITUARY

W. L. Mansfield, whose retirement as general passenger agent of the Chicago, St. Paul, Minneapolis & Omaha, was reported in the *Railway Age* of September 8, died at Los Angeles, Cal., on November 13.

R. E. Buchanan, traffic manager of the St. Louis-San Francisco at Memphis, Tenn., died in that city on November 9. Mr. Buchanan was born at Okolona, Miss., on February 7, 1876. He entered railroad service as a messenger of the Kansas City, Ft. Scott & Memphis (now part of the Frisco Lines). After serving in various minor capacities with the Frisco, he was promoted to executive general agent in 1922, with headquarters at Memphis. In 1928 Mr. Buchanan was advanced to assistant traffic manager at Pensacola, Fla., and in the same year he was promoted to the position he held at the time of his death.

George K. Thornton, retired engineer of track of the Boston & Maine, died on November 18, 1945. Mr. Thornton was born on January 22, 1865, at Thornton, N. H., and entered railway service with the Boston & Lowell in 1887. He joined the Boston & Maine as foreman, and soon advanced to roadmaster, serving in this capacity successively at Woodville, N. H., and Salem, Mass. He was appointed division engineer at Salem in 1911; acting engineer maintenance of way at Boston, Mass., in 1925; assistant to engineer maintenance of way there in 1926; and engineer of track in 1928. Mr. Thornton retired in 1938.

E. A. Park, superintendent of motive power and equipment of the Peoria & Pekin Union at Peoria, Ill., whose death on October 24 was reported in the *Railway Age* of November 10, was born at North Platte, Neb., on January 22, 1882. He entered railway service with the Union Pacific on January 1, 1900, as a machinist apprentice at North Platte, subsequently holding several minor positions. In 1904 he was promoted to district foreman of the Colorado division at Sterling, Colo., and held this position until he became traveling engineer of the Utah division at Ogden, Utah, in the fall of 1908. From January, 1909, to April, 1913, he was district foreman of the Colorado division at Denver, Colo. In April, 1913, Mr. Park was appointed to the position he held at the time of his death.

Col. Norman A. Ryan, general manager, Lines West, of the Chicago, Milwaukee, St. Paul & Pacific, with headquarters at Seattle, Wash., whose death on November 3 was reported in the *Railway Age* of November 10, was born in Superior, Neb., on November 5, 1891. After attending public schools he entered the service of the Chicago, Burlington & Quincy at the age of 18, beginning as a clerk and stenographer in the operating department. Three years later he went with the Southern Pacific as a clerk in the operating department at Sacramento, Cal., and in 1913 he returned to the Burlington, filling positions as clerk at Alliance, Neb., Deadwood, S. D., and Sheridan, Wyo. In 1917 he entered the employ of the Los Angeles & Salt Lake (Union Pacific system) in the office at Los Angeles, Cal. Leaving railroad service in 1918 to enter the Army as Private Ryan, he was attached to the Railway Transportation Corps of the A. E. F. in France, where he rose through the ranks to become first lieutenant. Returning to civilian life in 1919, he entered the employ of the then Chicago, Milwaukee & St. Paul, with which he was continuously connected until called again into military service. After working a short time in the office of the general superintendent at Chicago, he was transferred in 1920 to Milwaukee, Wis., where he was trainmaster of terminals. In 1921, he was shifted to the Terre Haute division, being promoted in 1923 to assistant division superintendent at Terre Haute, Ind. In 1924 Mr. Ryan was advanced to superintendent at Terre Haute, where he remained until his transfer to Milwaukee in 1927. In 1928 he became superintendent of the consolidated Milwaukee division, composed of three former divisions. Four years later he was promoted to assistant general manager of the eastern lines, with headquarters in Chicago. In 1939 he was appointed general manager of the western lines of the Milwaukee, with headquarters at Seattle, Wash., the position which he held when again called for active military service in 1942. Col. Ryan was still serving with the armed forces at the time of his death.

One era ends—another begins..

THE years closely following 1910 saw an important development in railroading. The fireman no longer literally moved trains by his muscles. He lay aside his scoop and began to spend more time on the cab seat, for stokers were coming into general use.

About this time too, HUNT-SPILLER GUN IRON was receiving wide acceptance as a preferred material for valve and cylinder bushings, packing, and other vital locomotive parts.

Since 1910, locomotives have improved; power has increased, also monthly mileage, and the weight of trains. Many an outmoded railroad practice has been modified or abandoned, but 76 important railroads which were using HUNT-SPILLER GUN IRON 35 years ago still depend upon its superior wearing qualities. Which to our way of thinking, is conclusive proof that you can place complete reliance on any of the parts listed below.

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Do You Remember this Advertisement in 1936?

AFTER 22 YEARS
–they rebuilt the cars
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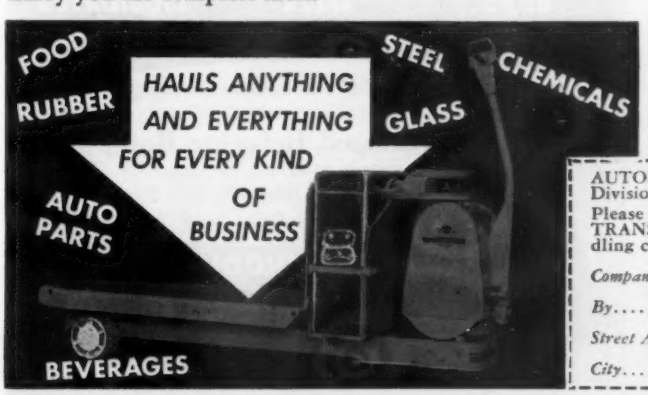

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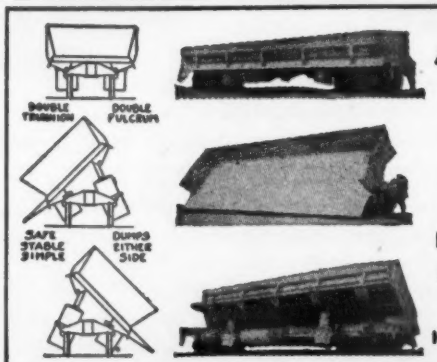

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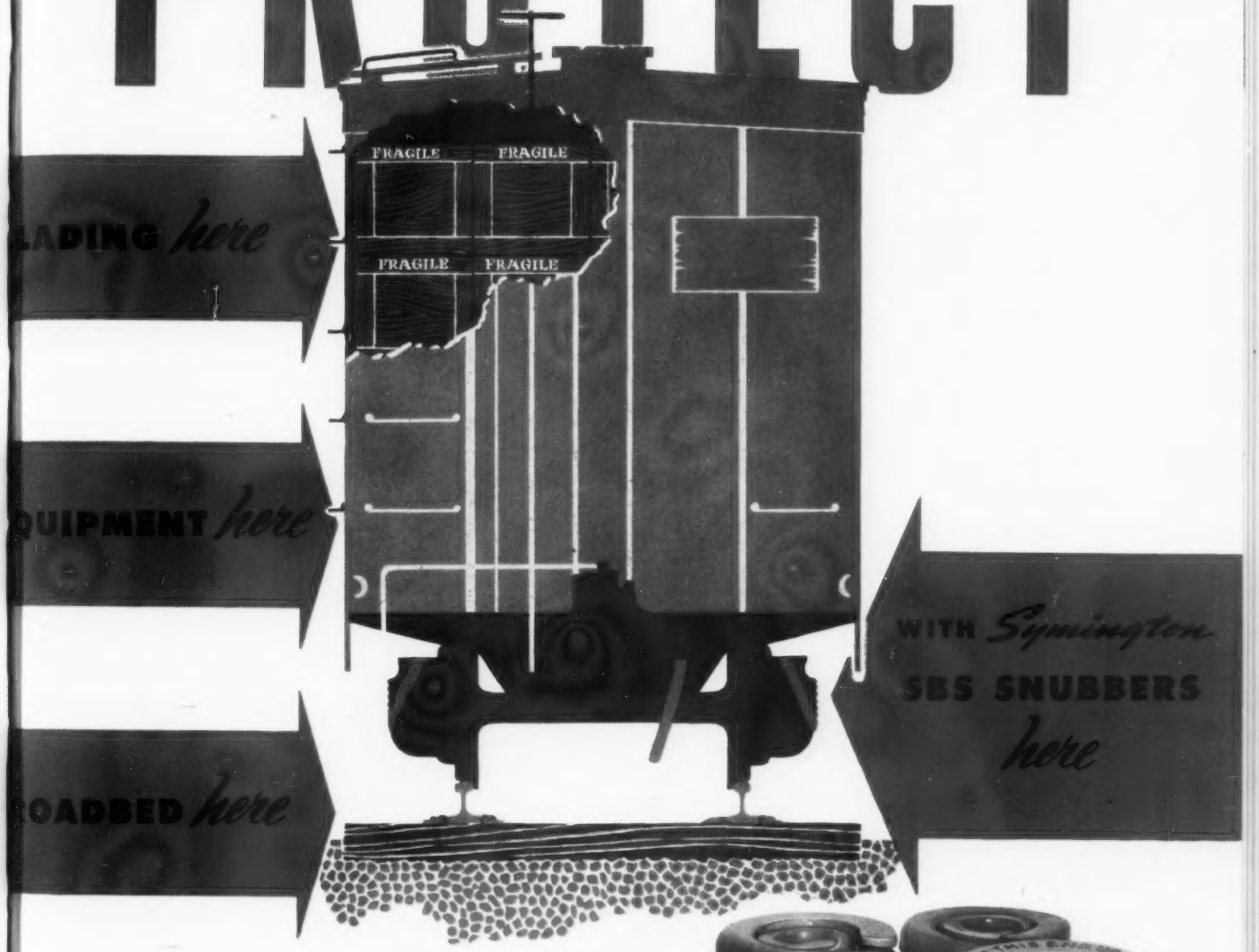

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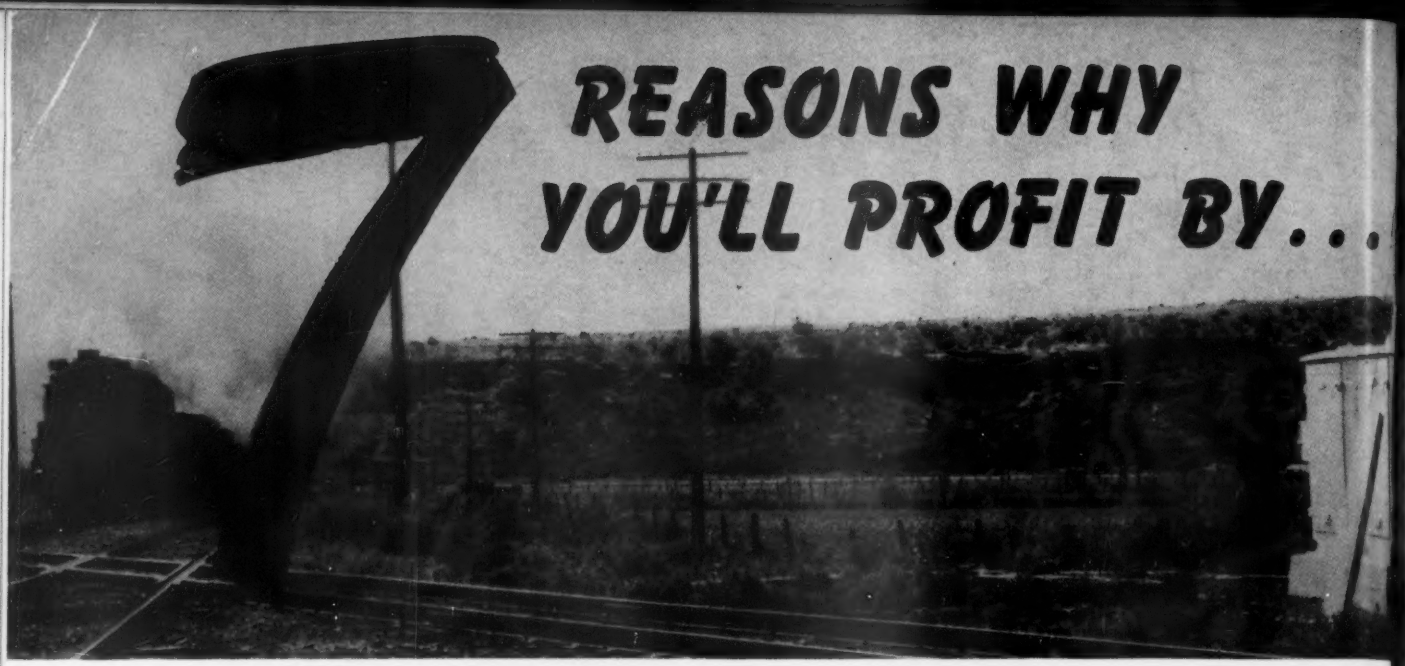

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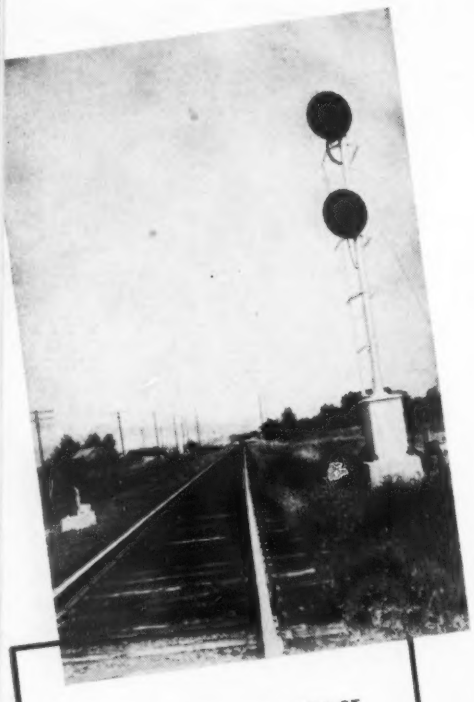

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